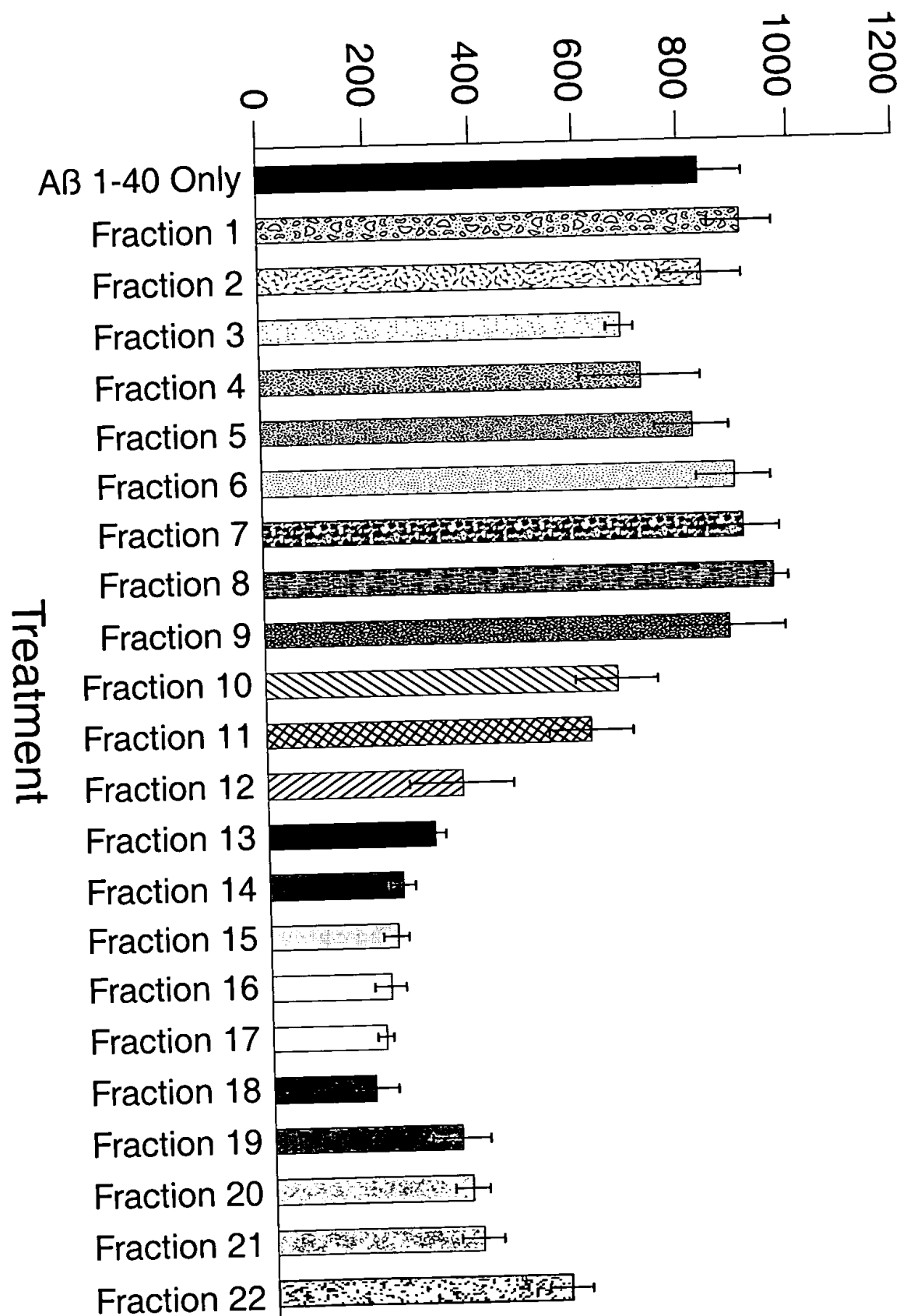


Fluorescence Units



102011 529E5001

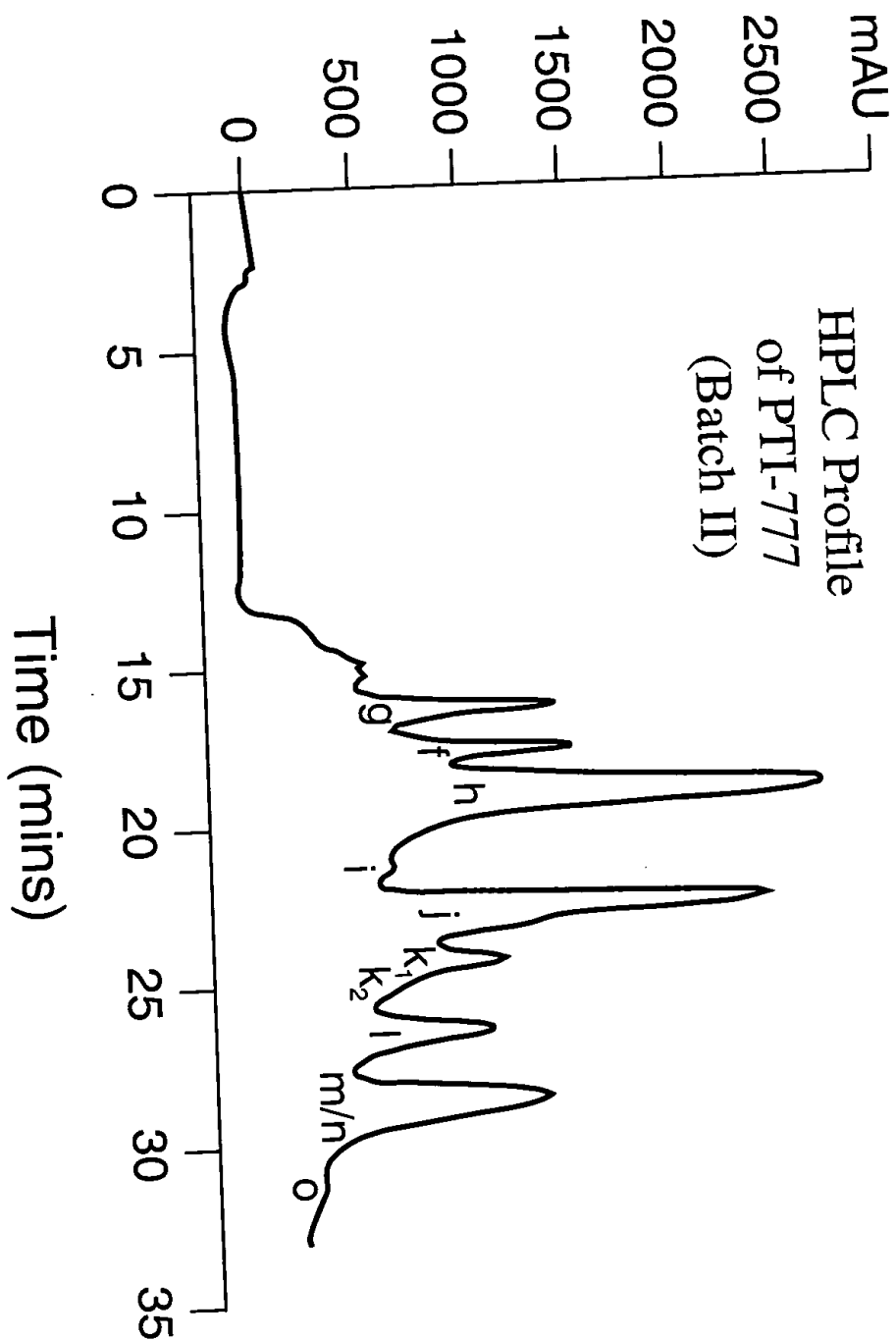


FIGURE 2

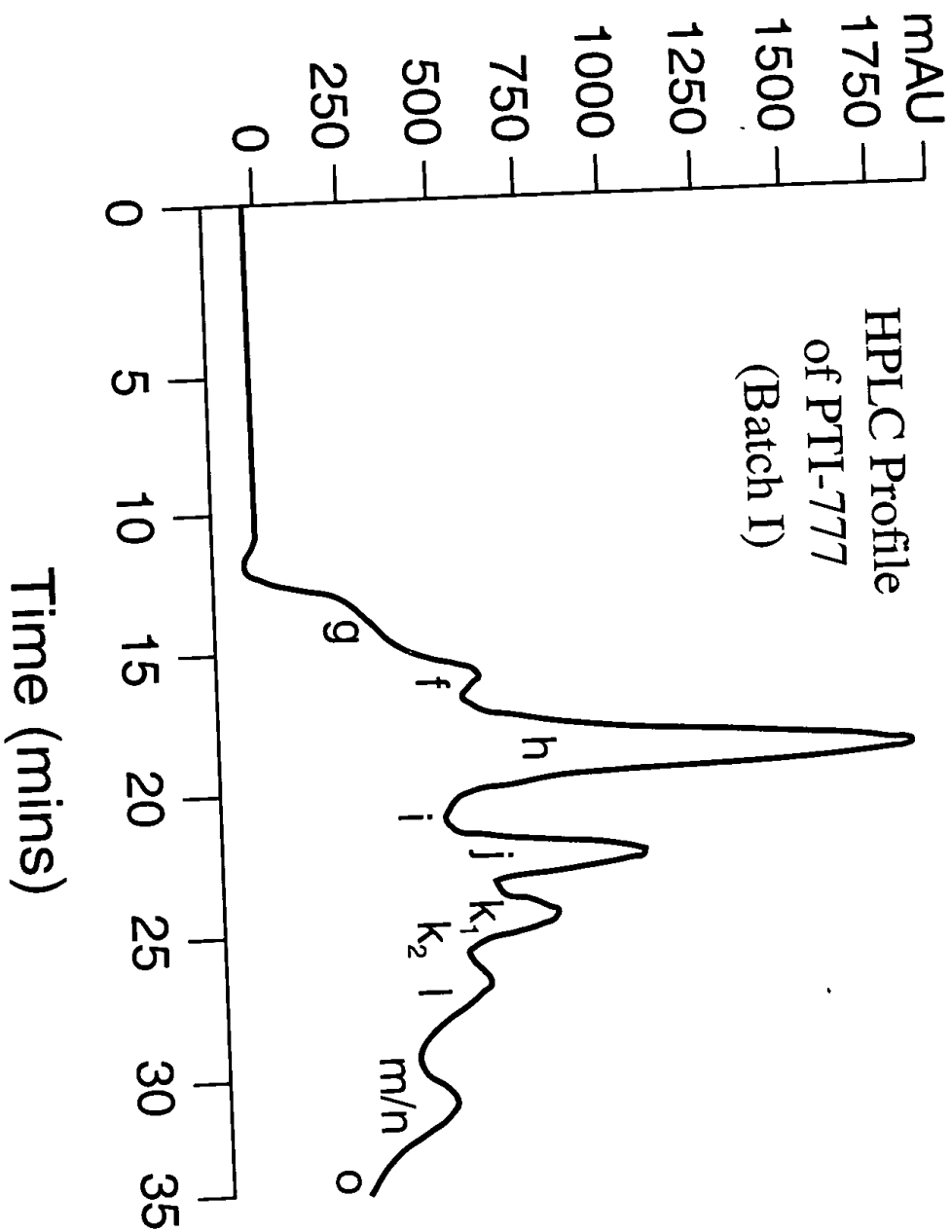


FIGURE 3

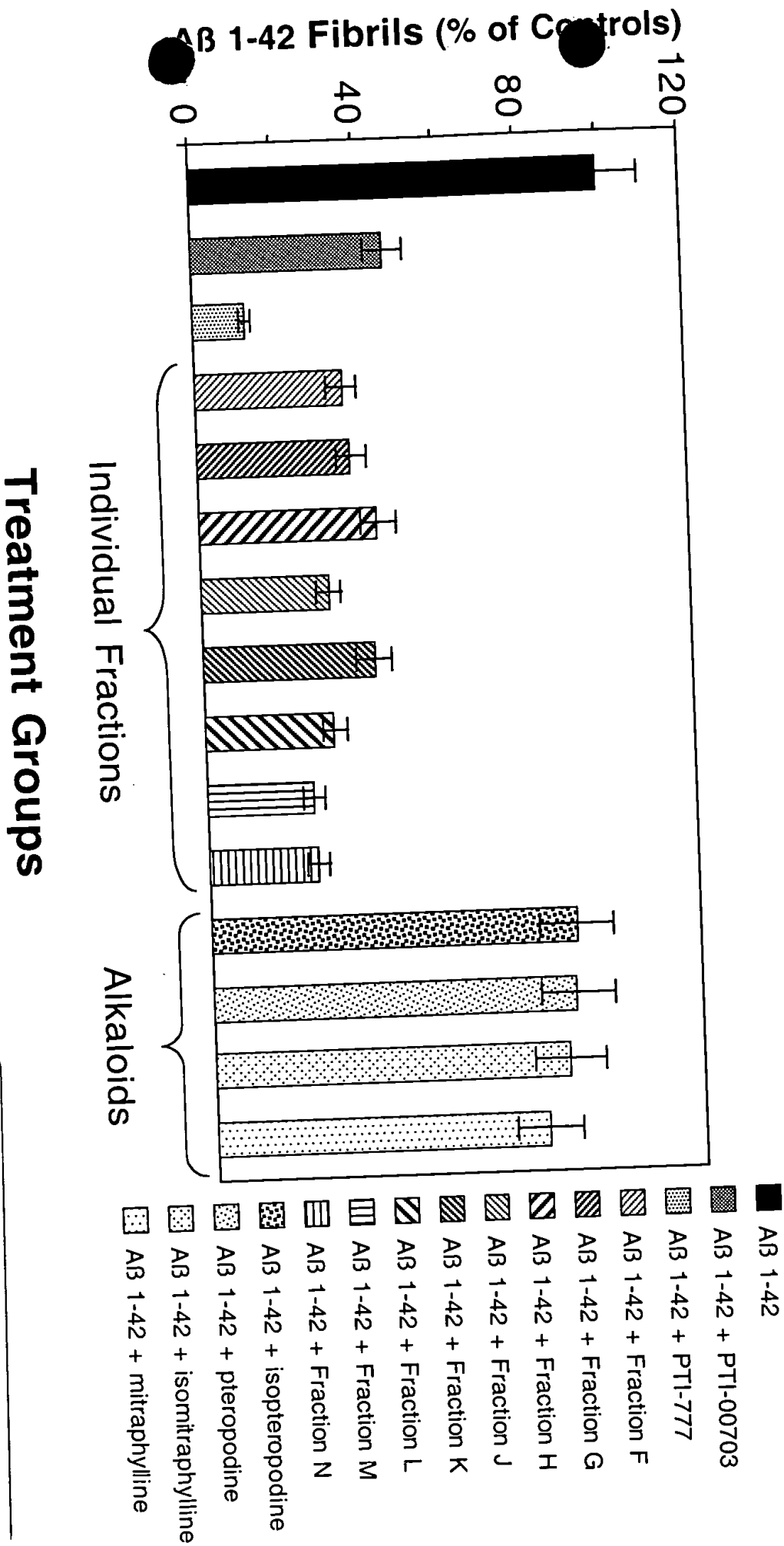


FIGURE 4

102011" 52935001



— FIGURE 5 —

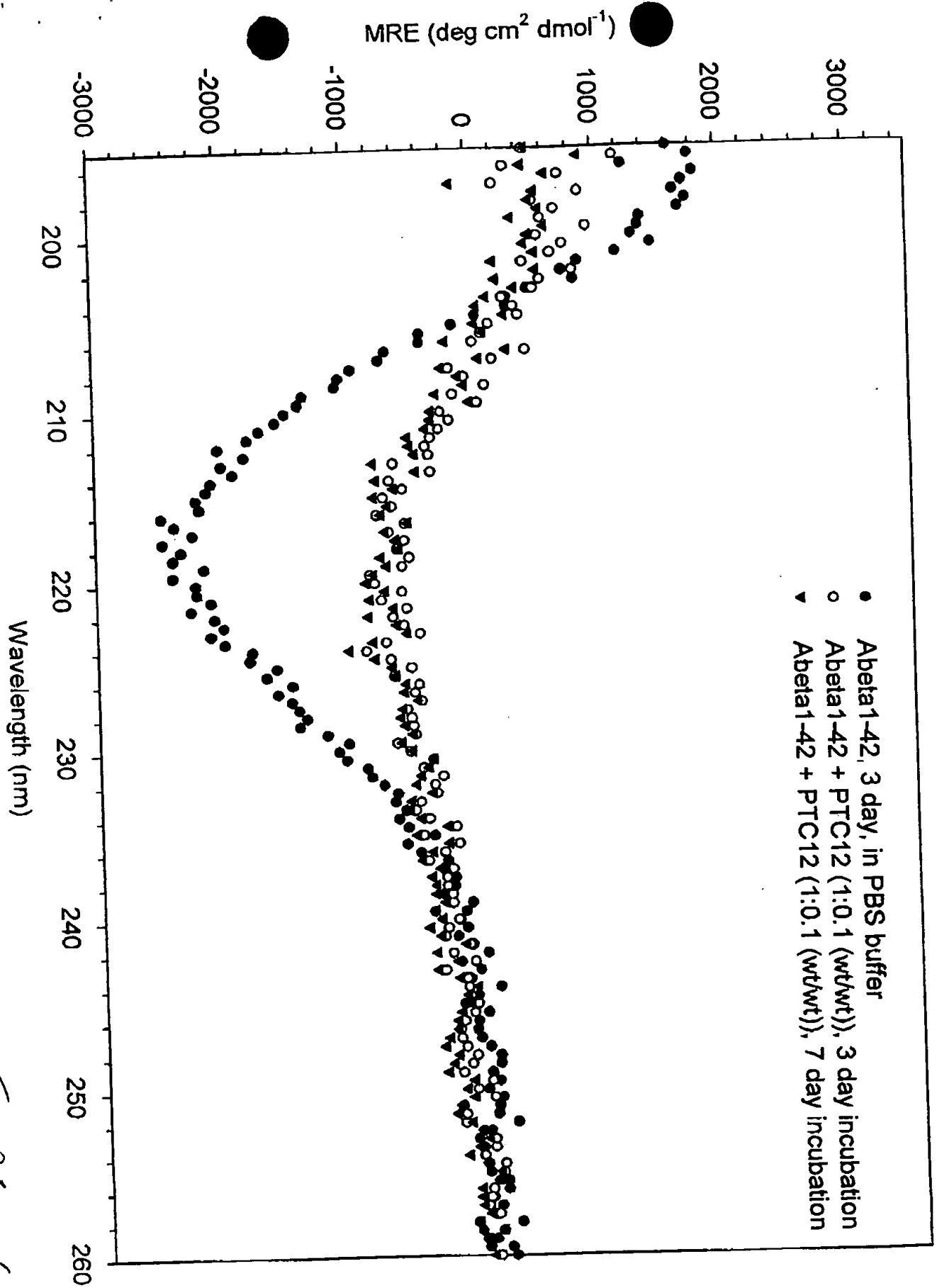
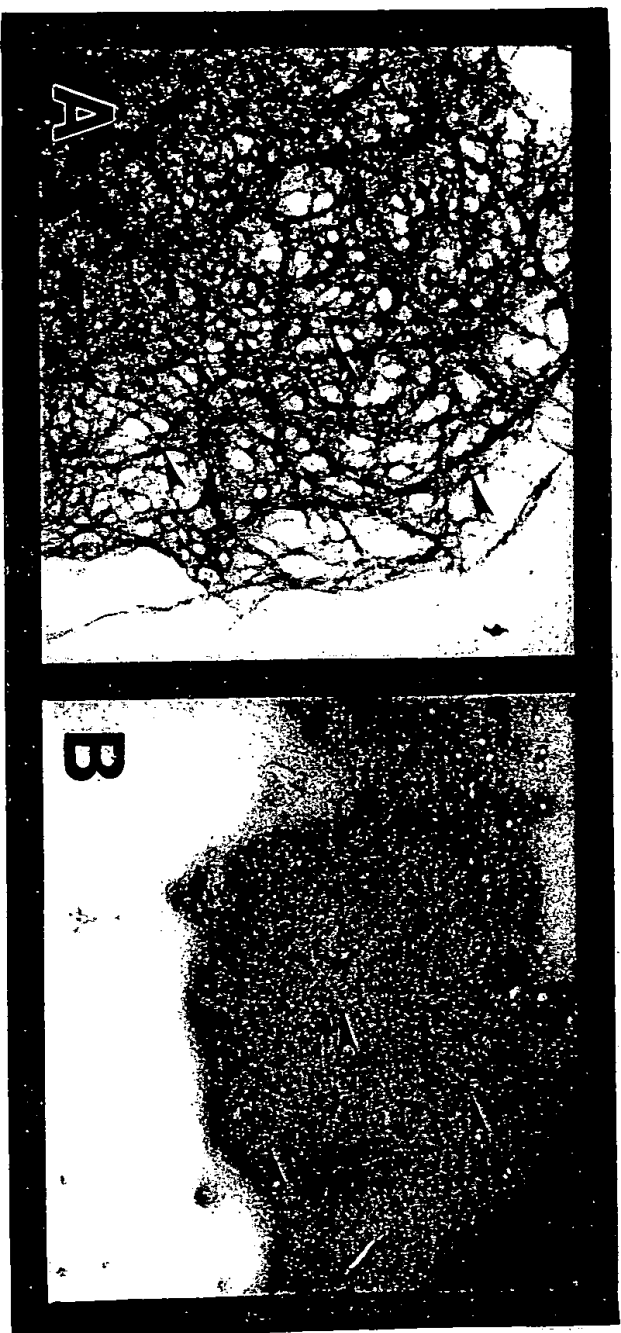


FIGURE 6

102011" 529E5001



- FIGURE 7 -

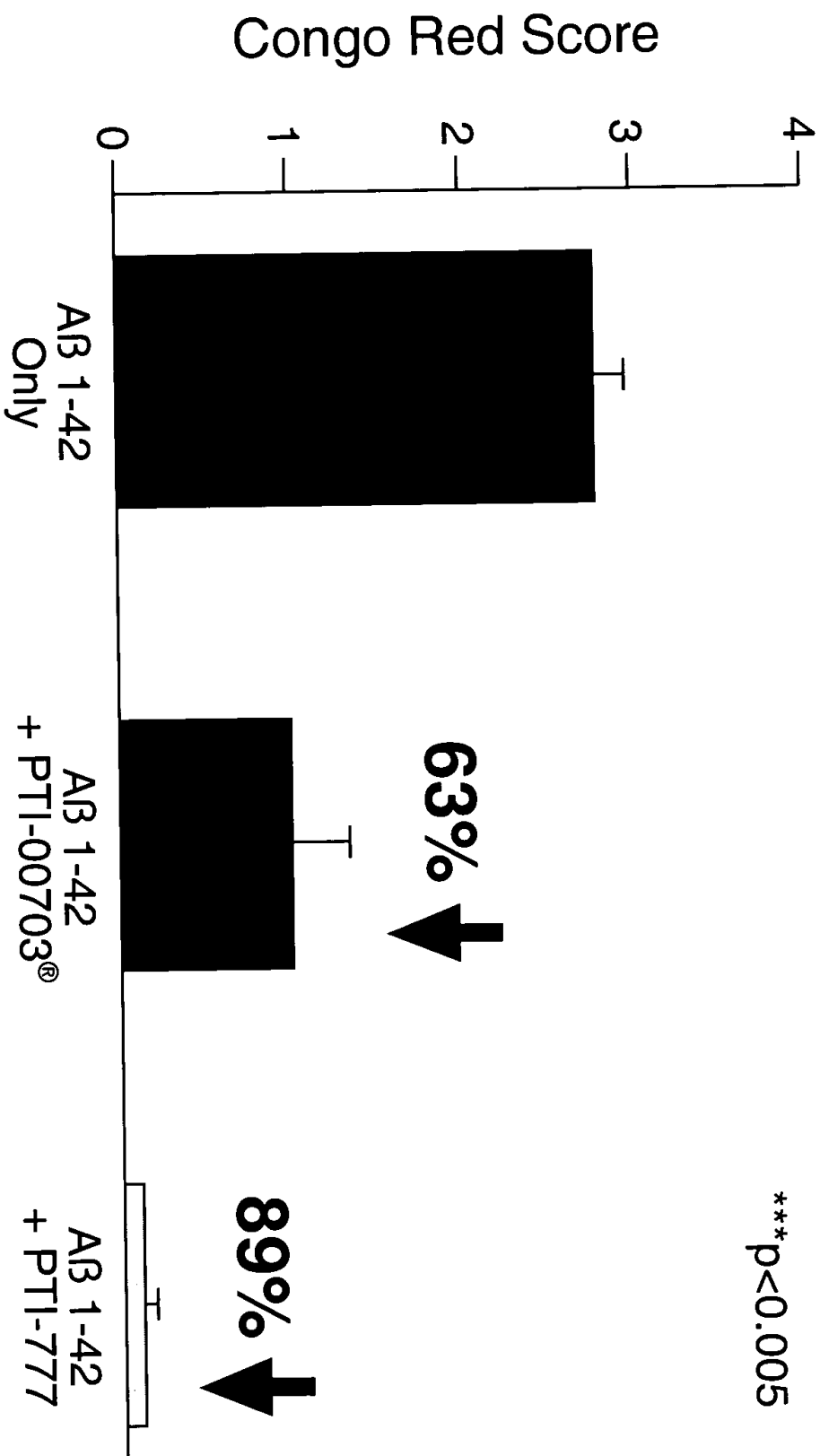
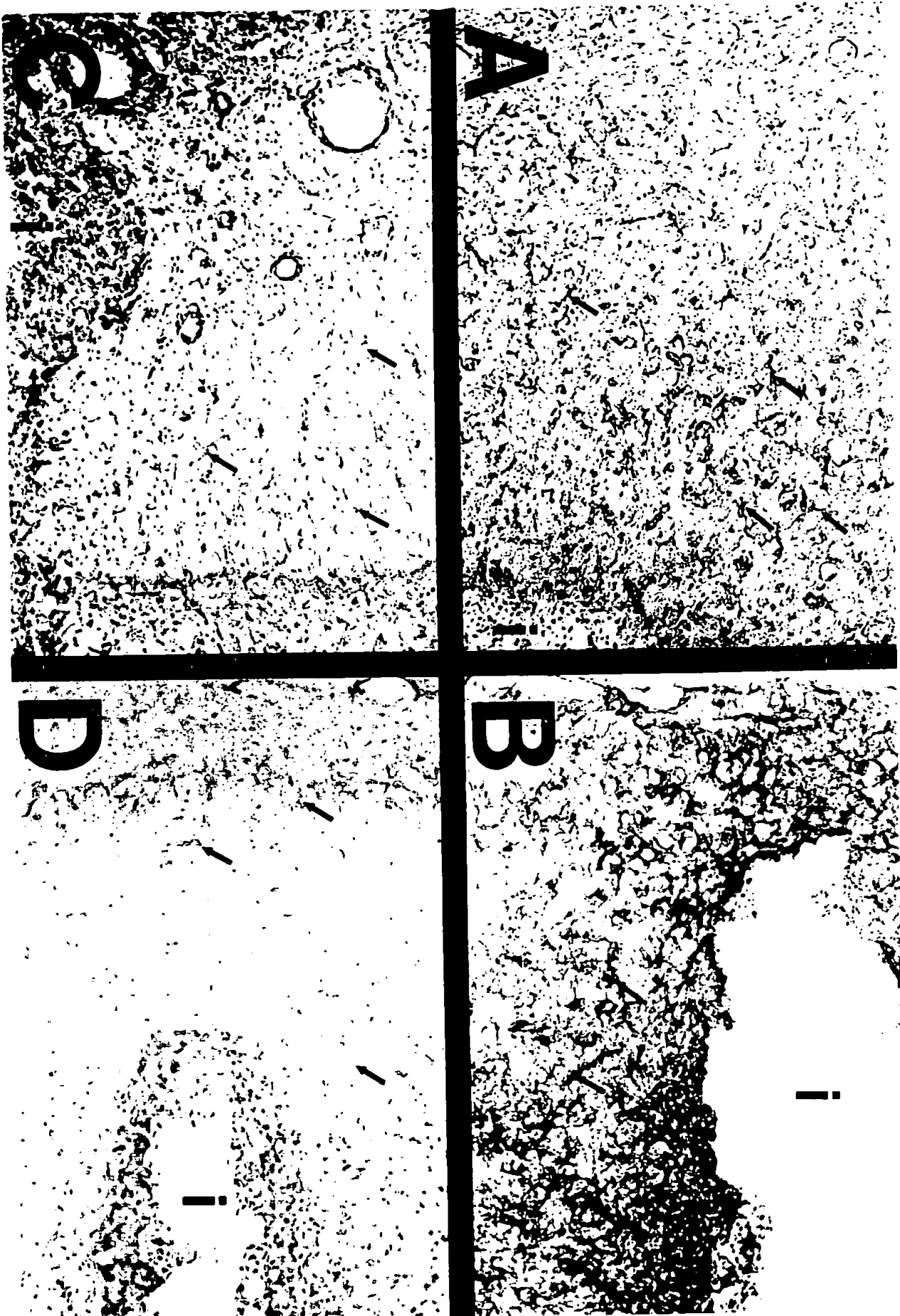


FIGURE 8



- FIGURE 9 -



102011" 529ES001

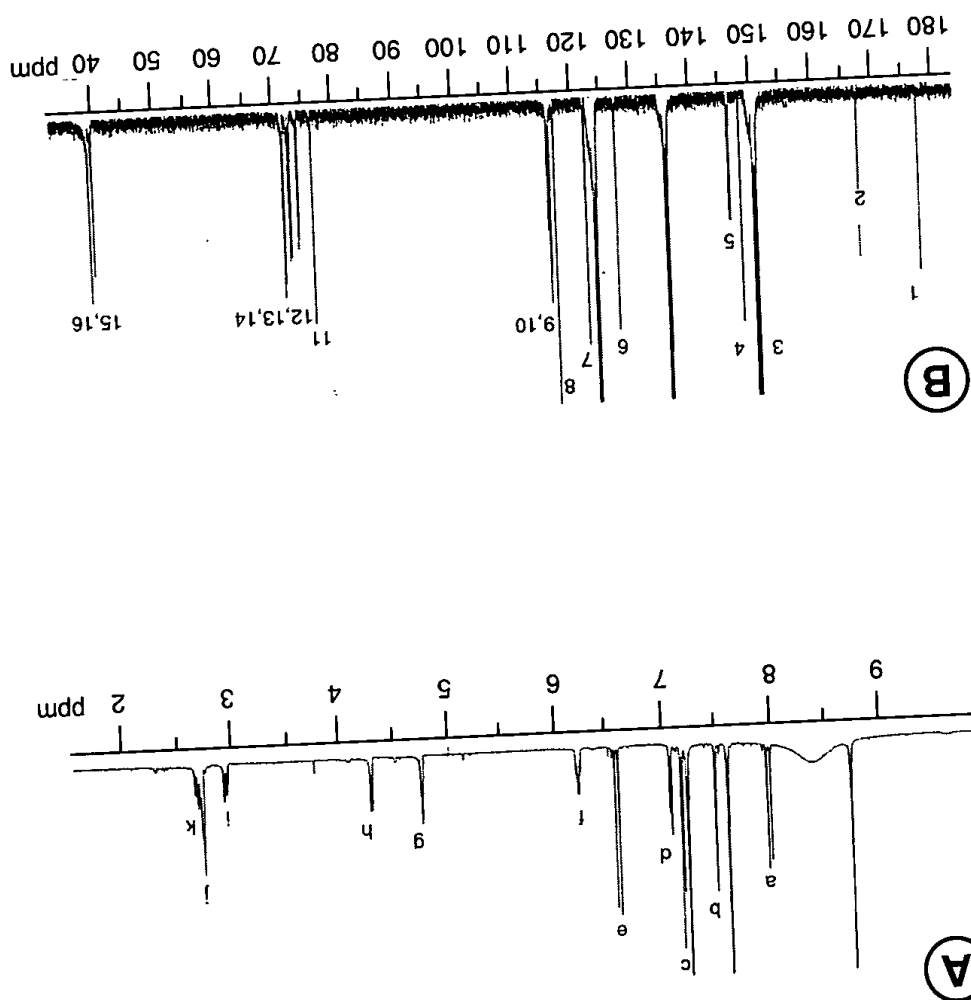
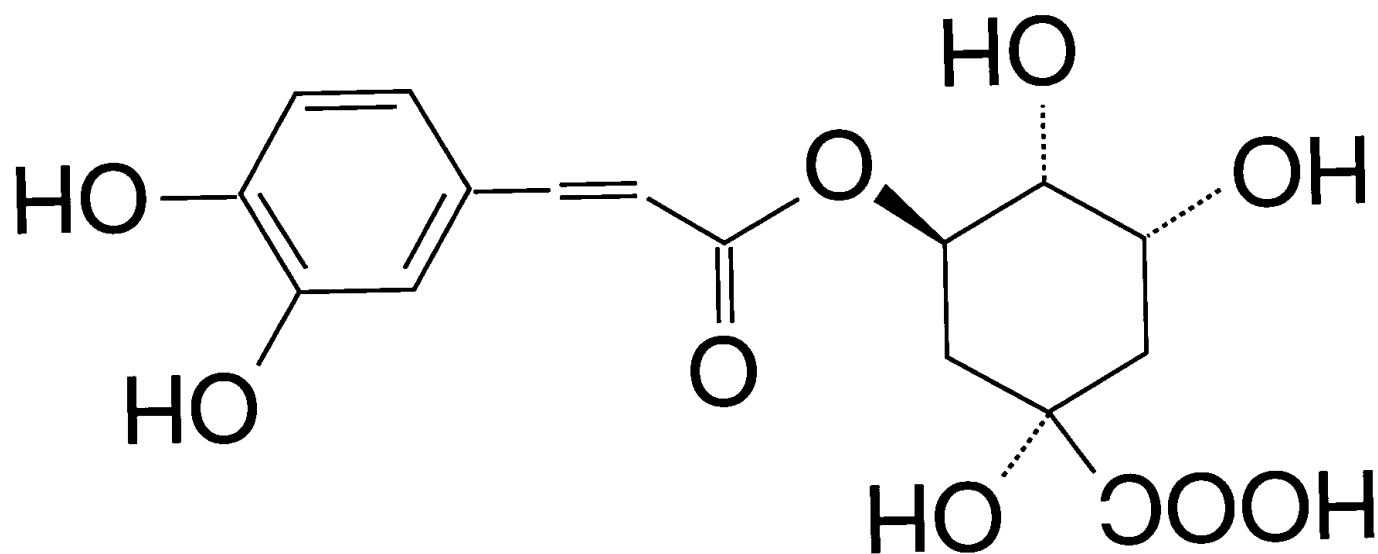


FIGURE 10



10201-595001

102011-52935001

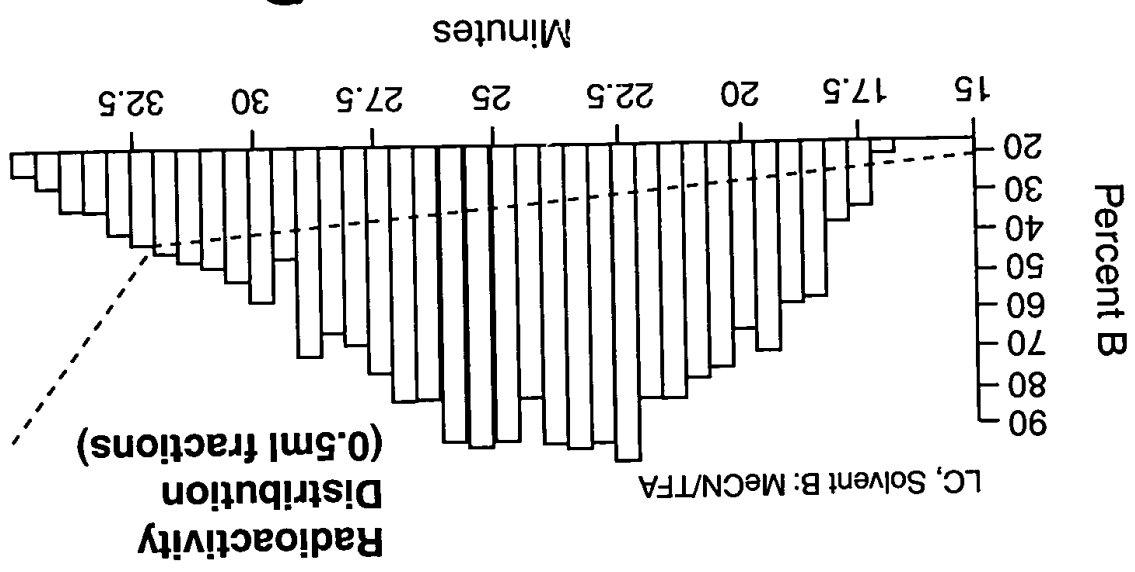
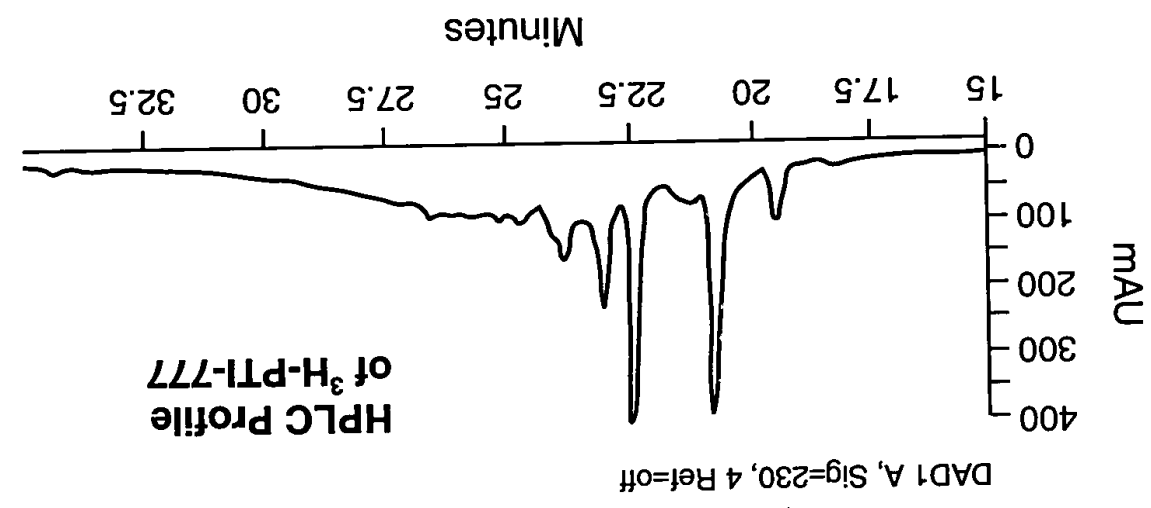
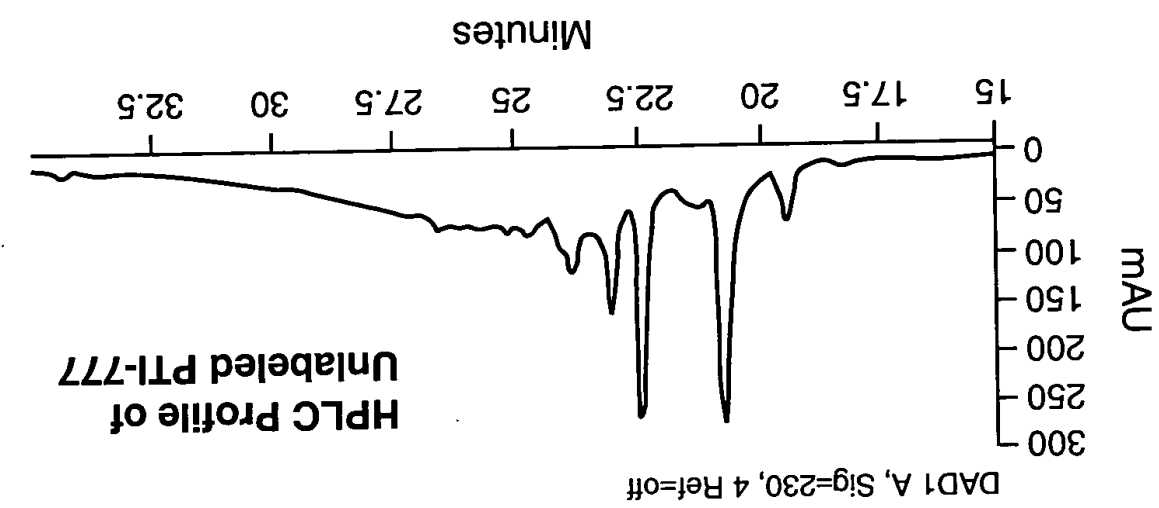


FIGURE 12

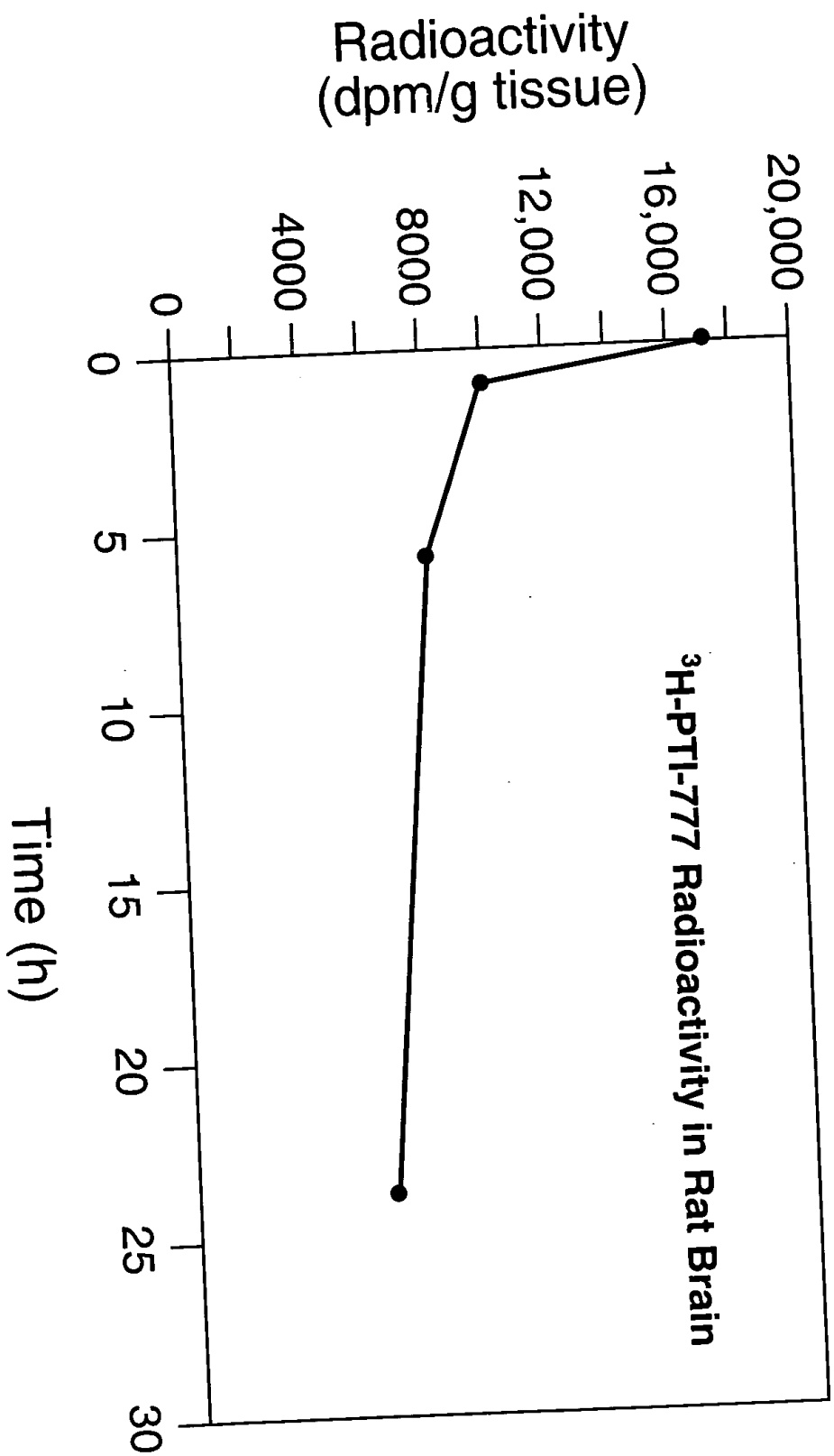


FIGURE 13

Time Run: 11/13/00 11:01:40 AM
Report Created: 11/13/00 11:03:26 AM
Operator:
Ionization Mode: ESI - positive ions

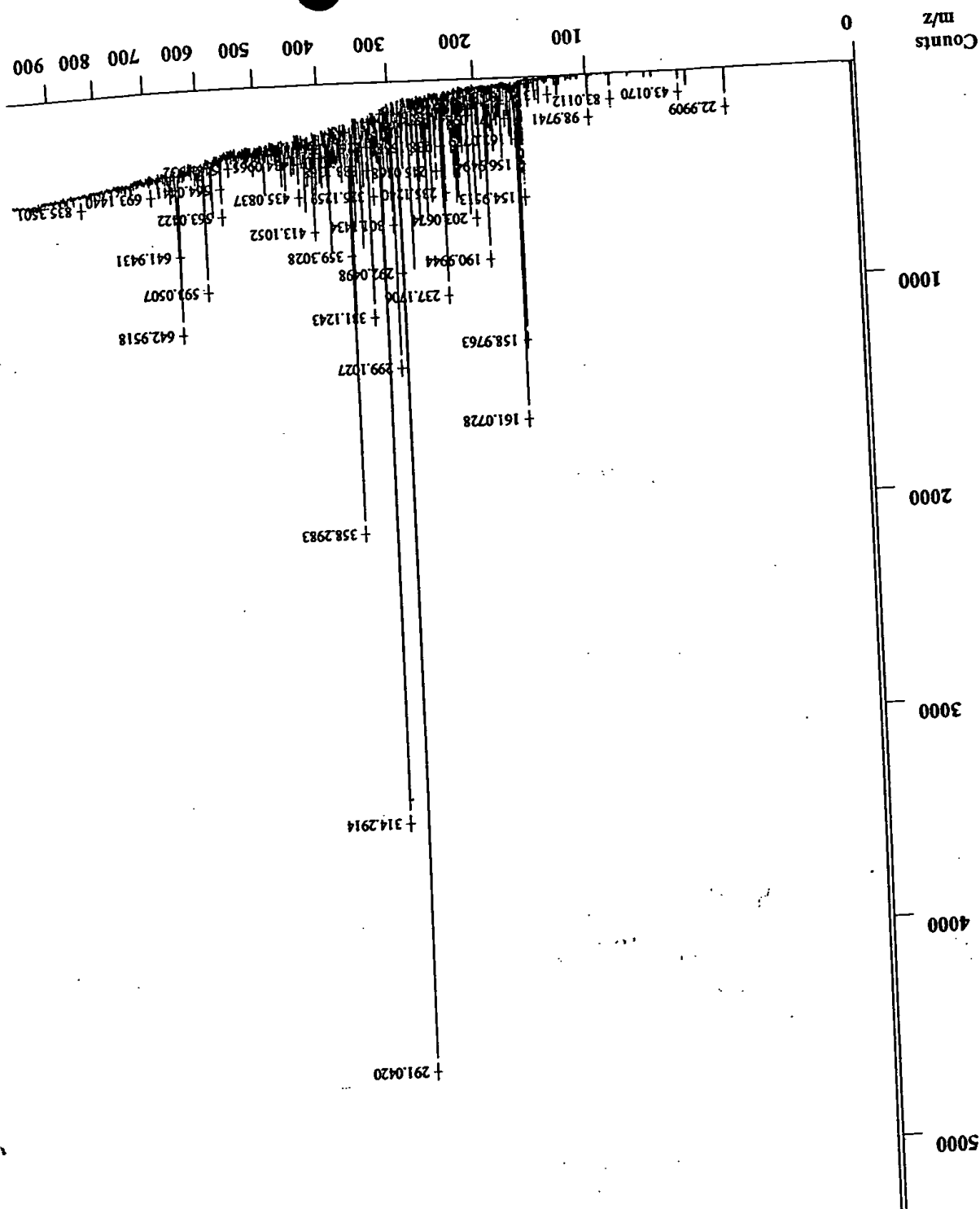
G:\-41.dat

Method Name:

Sample ID:

Instrument:

Spec # Range: 2706 - 2778



TO201T" S29E500T

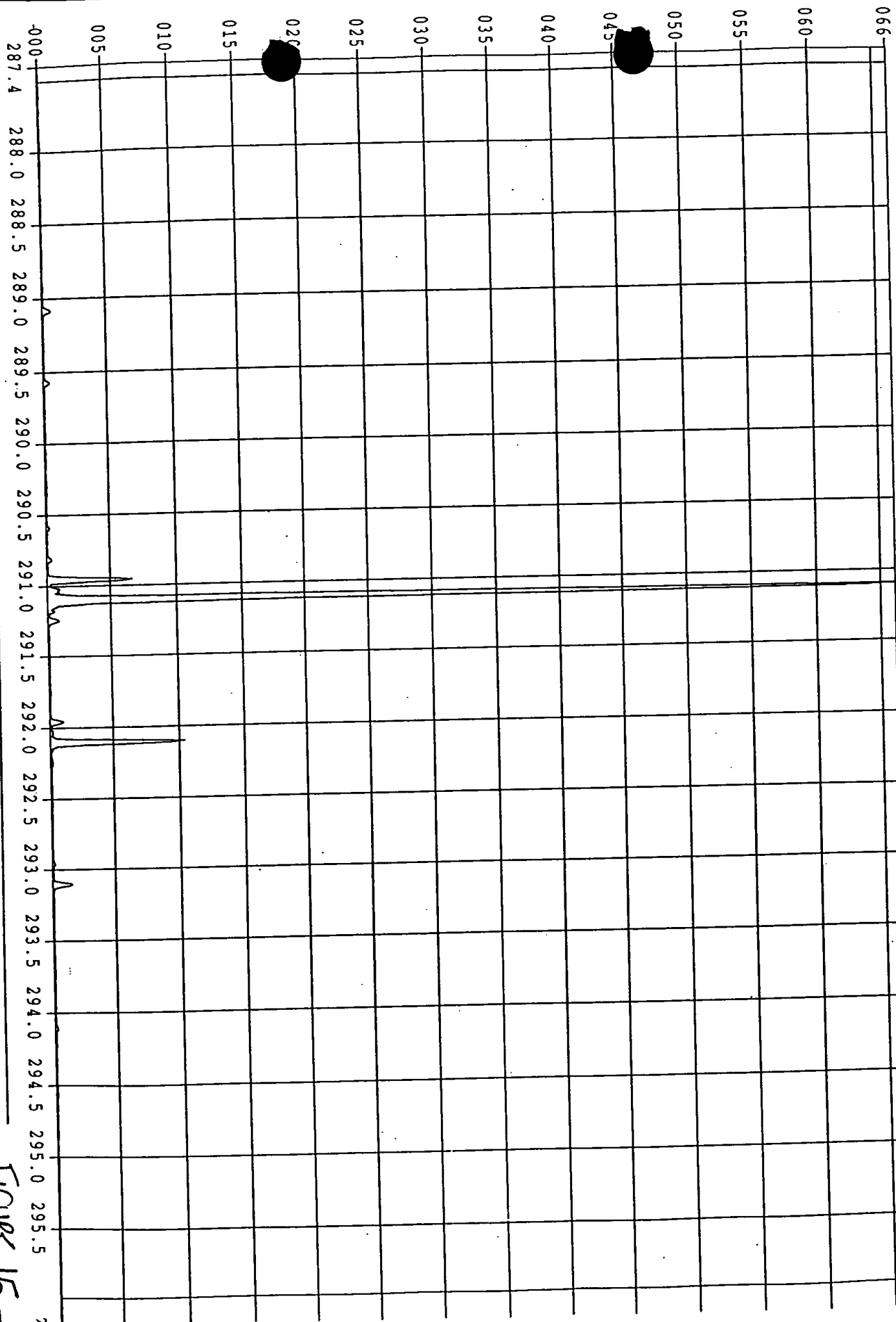
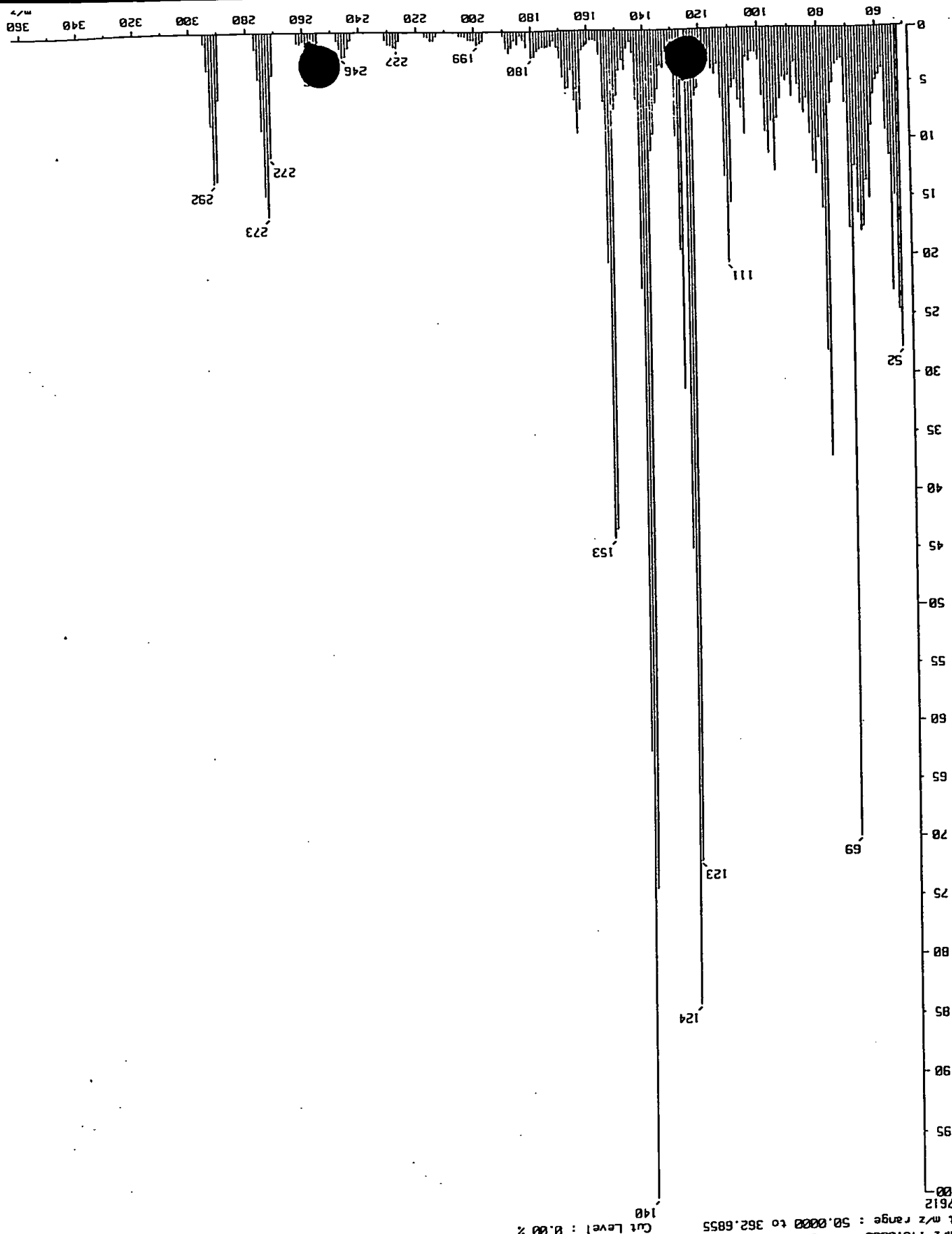


FIGURE 15-

102011 52955001

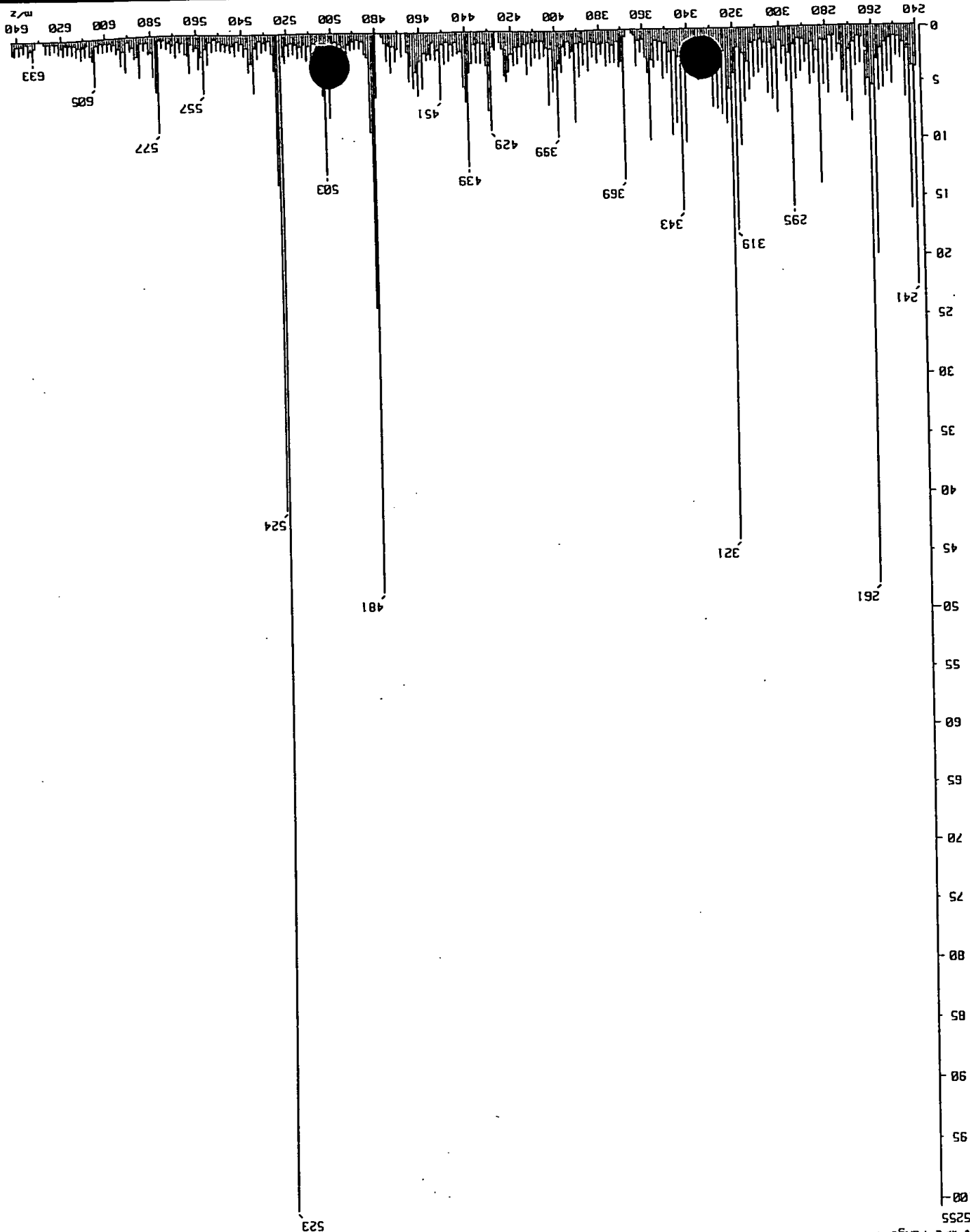


[Mass Spectrum]
 Date : BYU_A726
 Sample : 1
 Note :
 Inlet : Direct
 Spectrum Type : Normal Ion (MF-Linear)
 Scan# : (5,8)
 RT : 0.64 min
 BP : m/z 140.0000
 Int. : 135.19
 Output m/z range : 50.0000 to 362.6855
 Cut Level : 0.00 %

Ion Mode : EI+

FIGURE 16

102011 5235001

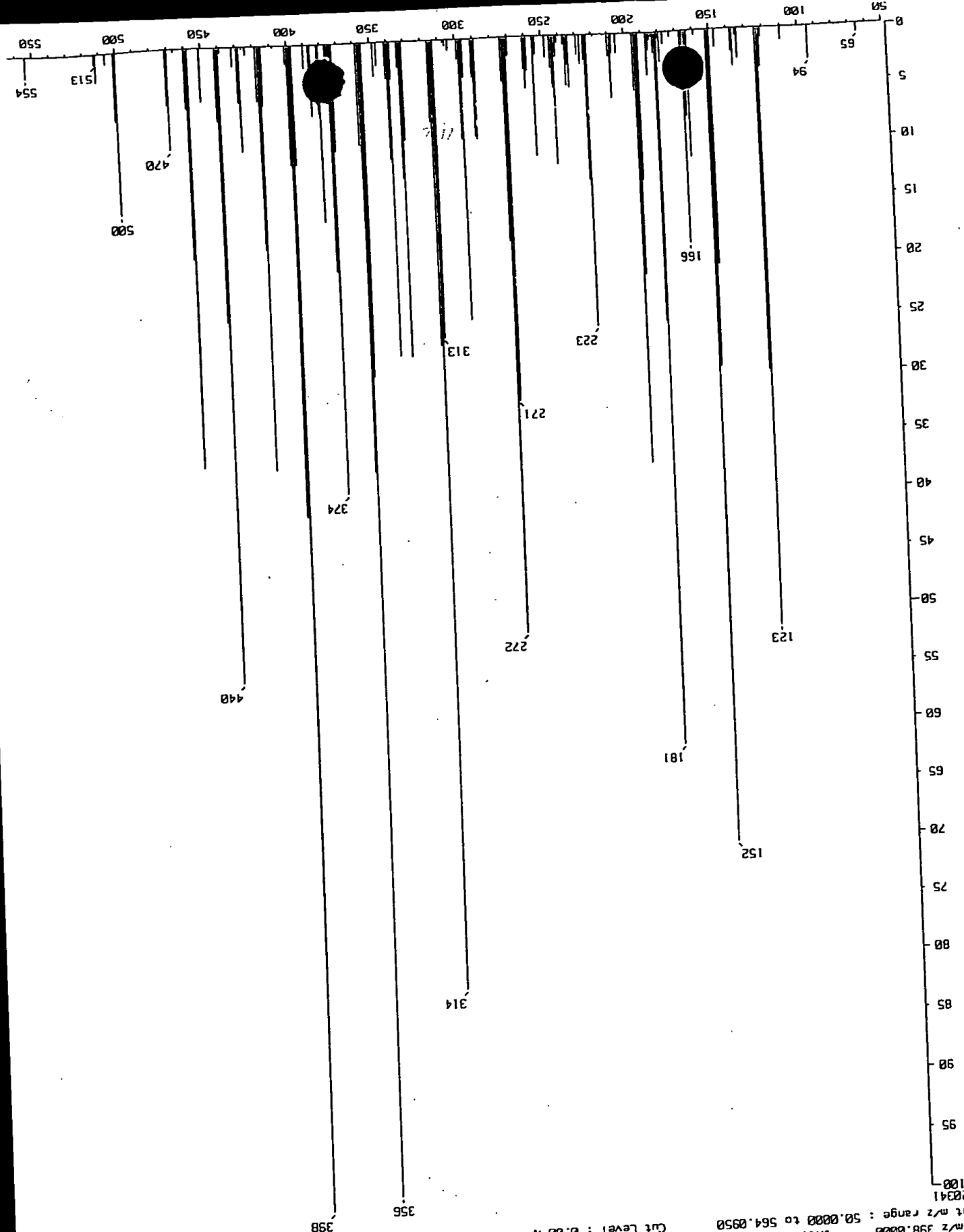


[Mass Spectrum]
 Date : BYU R349
 Sample : acylated
 Note : Thiolglycerol & Na
 Inlet : Direct
 Spectrum Type : Normal Ion [MF-Linear]
 Scan# : (1,4)
 RT : 0.08 min
 BP : m/z 523.0000
 Output m/z range : 240.0000 to 642.3739
 Ion Mode : FFB+

Cut Level : 0.00 %

FIGURE 17

TOEOTF-529E500T



[Mass Spectrum]
 Data : BYU R373
 Sample: acylated-1
 Note :
 Inlet : Direct
 Spectrum Type : Normal Ion [MF-Linear]
 Scan# : (7,9)-(3,4))(k=1.0)
 RT : 0.89 min
 BP : m/z 398.0000
 Output m/z range : 50.0000 to 564.0950
 Cut Level : 0.00 %

FIGURE 18

H1 of sample:
Pulse Sequence: zgpg1

102011" 529E500K

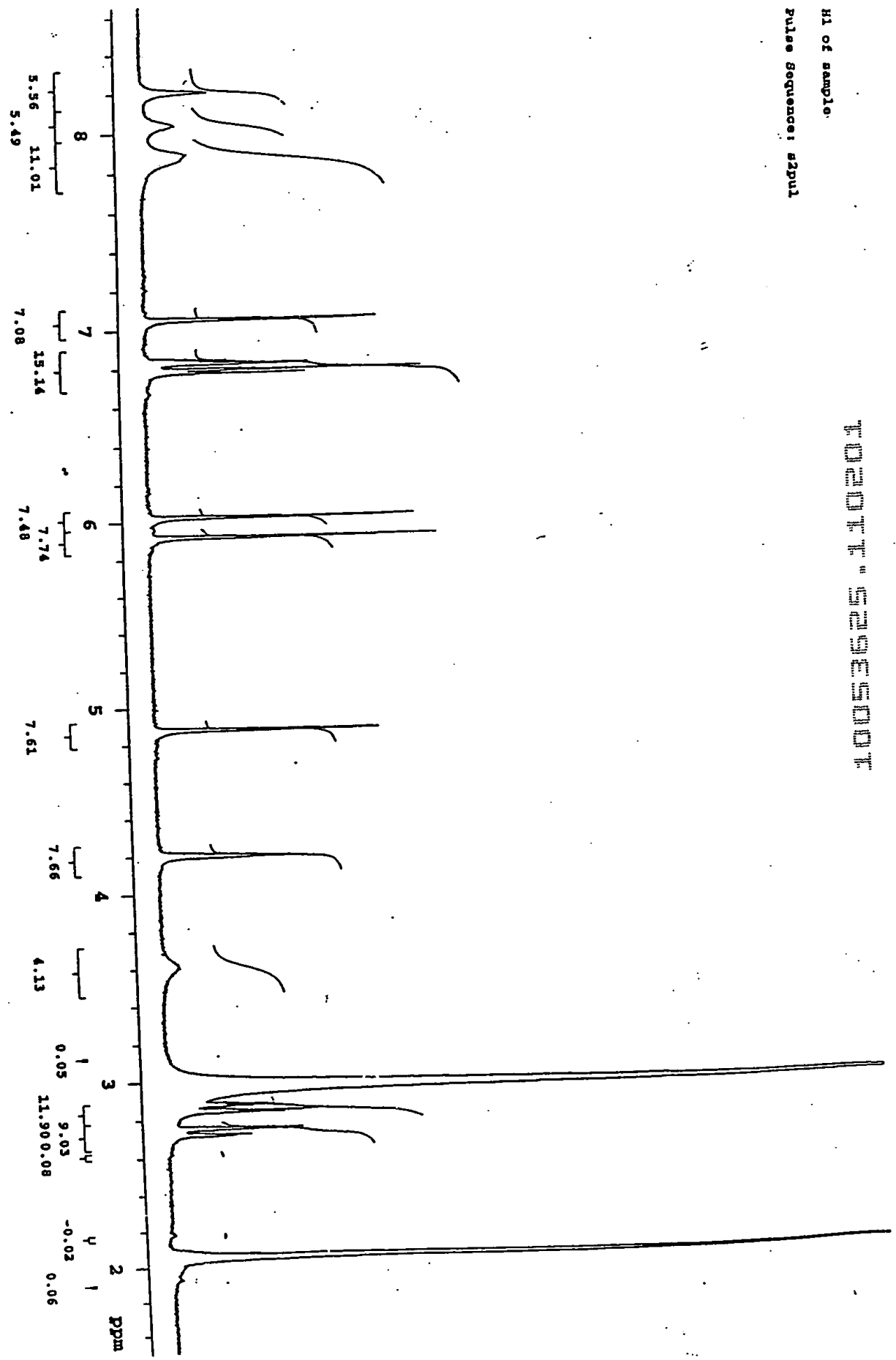


FIGURE 19

C13 of Sample: In Acetone-d6
Pulse Sequence: zgpg30

102017 52995001

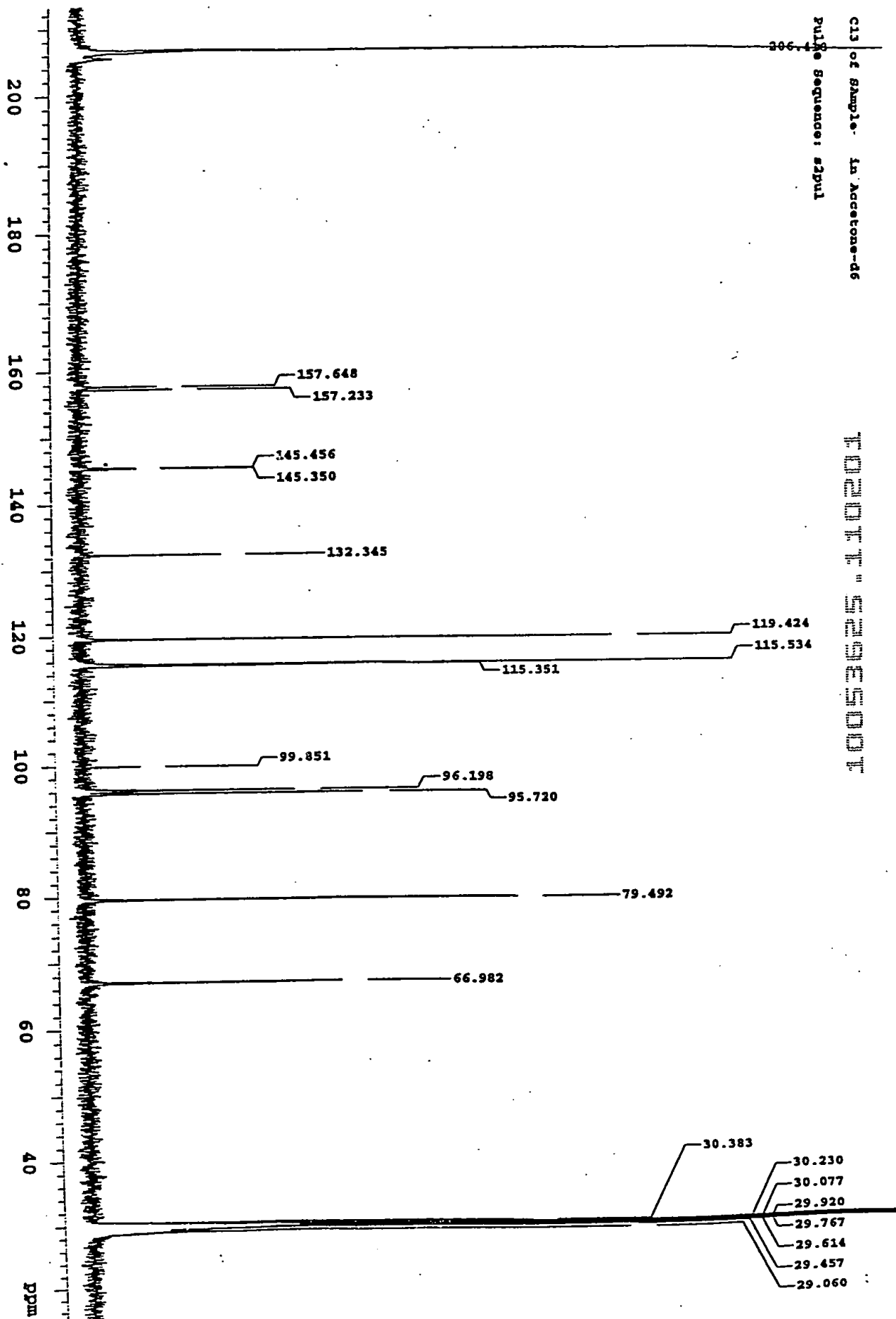
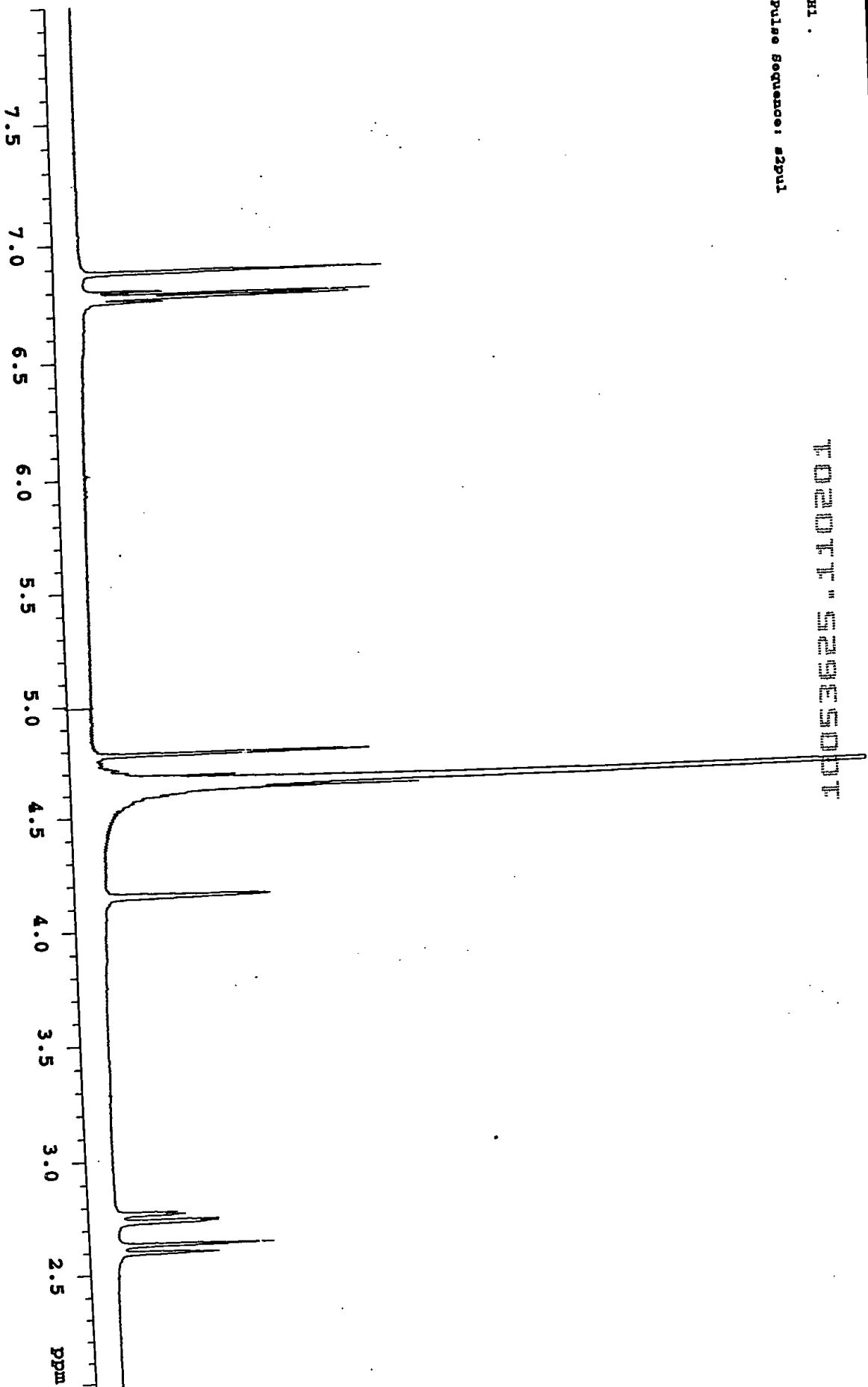


FIGURE 20

H1.

Pulse Sequence: s2pul

TO2DTF" S29E50DT



—
FIGURE 21

C13 of Sample 1A D20.
Pulse Sequence: zgpg1

TO20T1" S29E500T

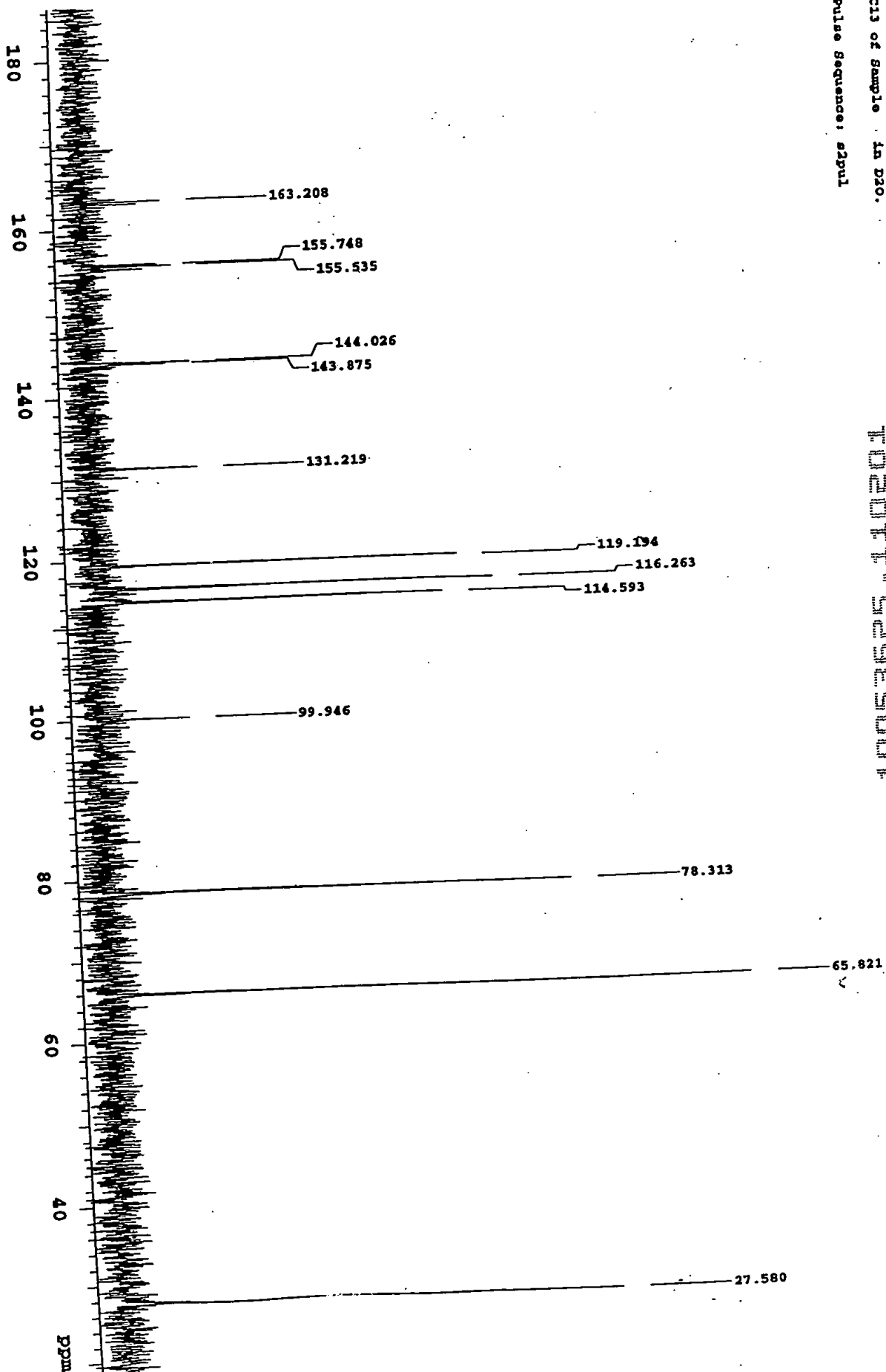


FIGURE 22

COSY of Sample:

Pulse Sequence: relayh

Solvent: Acetone

Ambient temperature

UNITY-500 "nmr500"

PULSE SEQUENCE: relayh

COSY 90-90

Acq. time 0.302 sec

Width 3817.5 Hz

2D Width 3817.5 Hz

16 repetitions

159 increments

OBSERVE H1, 499.8614428 MHz

DATA PROCESSING

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 1024 x 1024

Total time 14 min, 12 sec

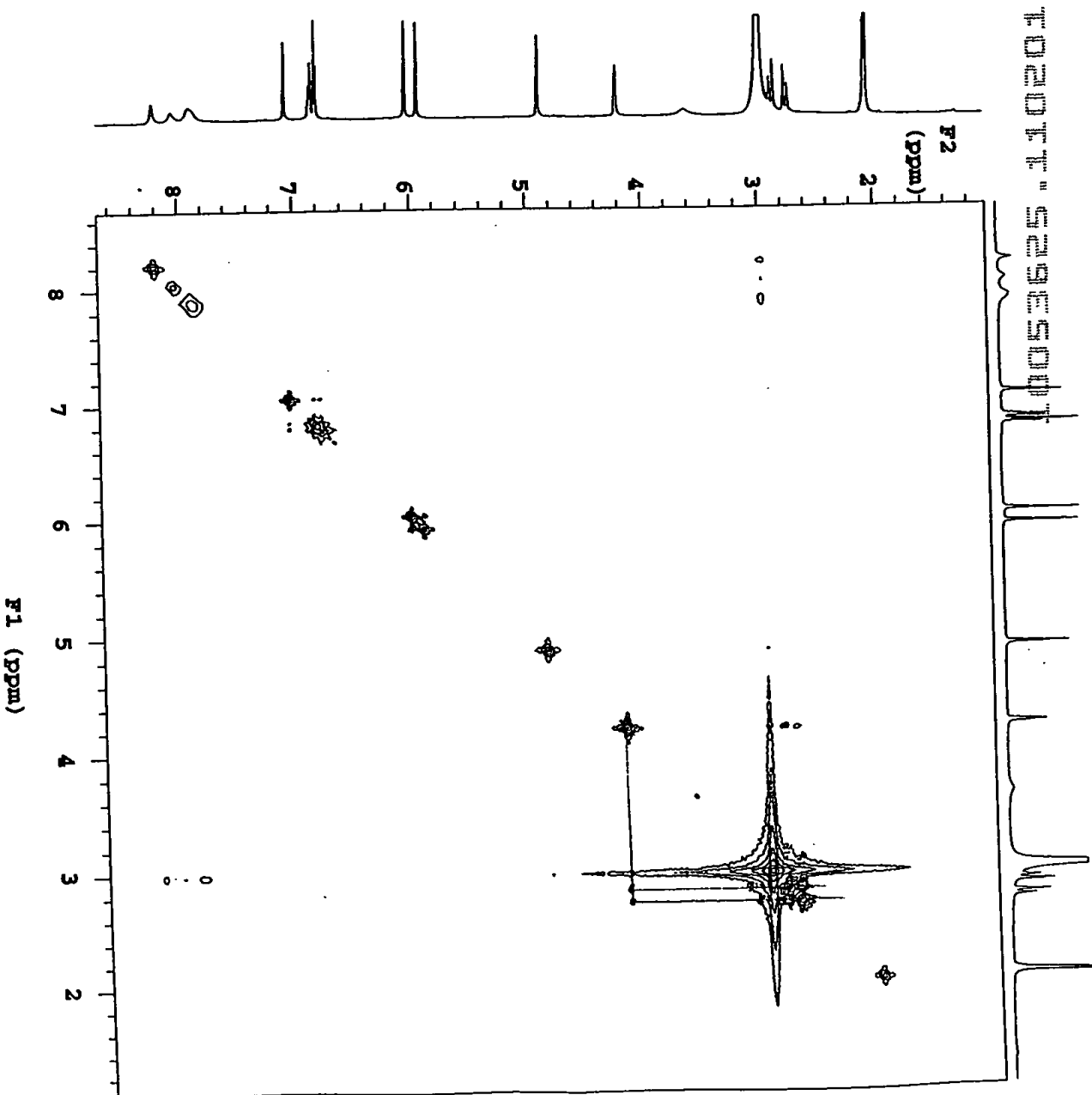


FIGURE 23

COSY

Pulse Sequence: relayh

Solvent: D2O

Ambient temperature

UNITY-500 "nmr500"

PULSE SEQUENCE: relayh

Relax. delay 0.500 sec

COSY 90-90

Acq. time 0.178 sec

Width 2882.3 Hz

2D Width 2882.3 Hz

8 repetitions

120 increments

OBSERVE H1, 499.8801324 MHz

DATA PROCESSING

Line broadening 0.1 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

F2 size 1024 x 1024

Total time 11 min, 23 sec

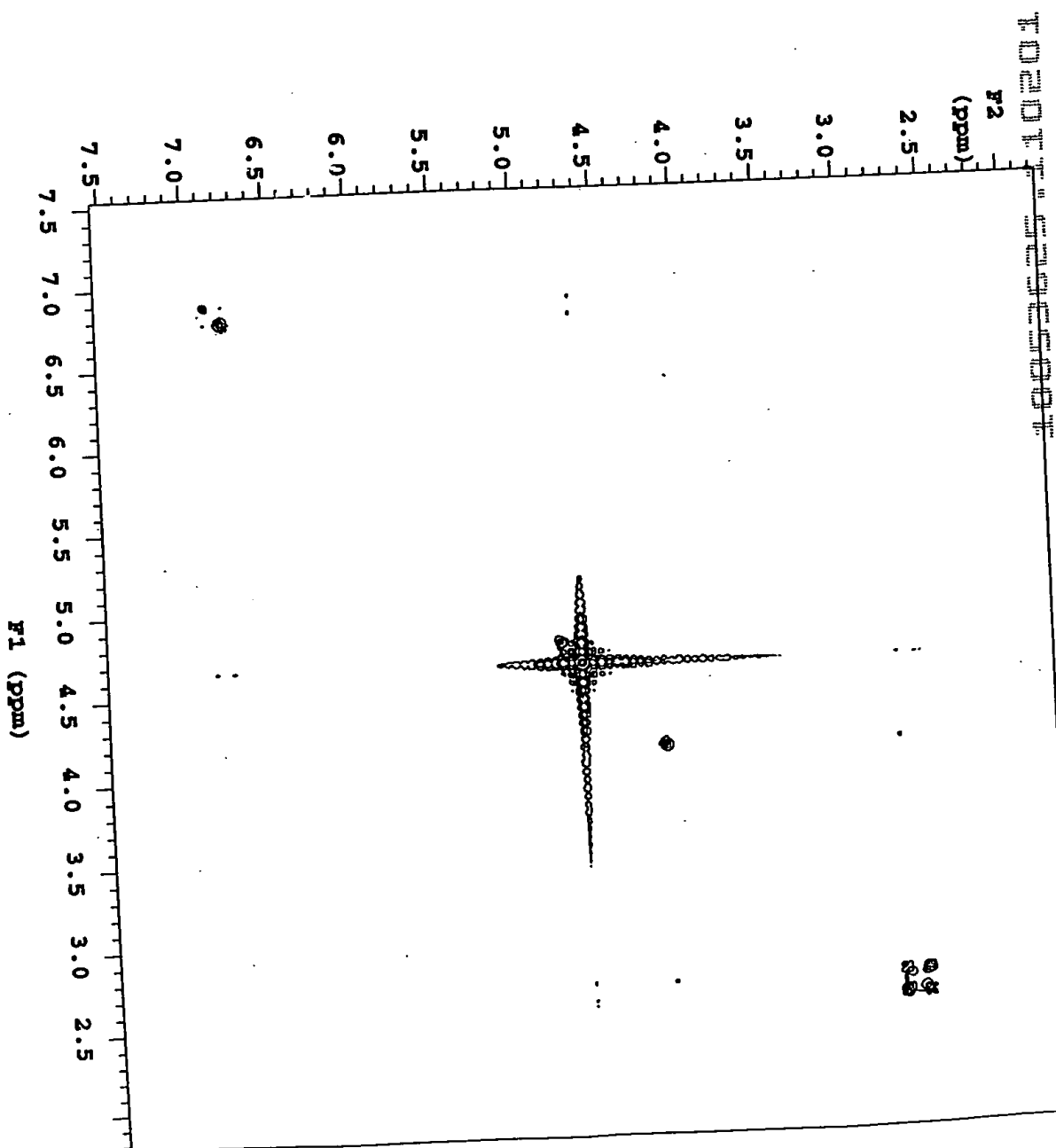


FIGURE 24A

COSY

Pulse sequence: relayh

Solvent: D2O

Ambient temperature

UNITY-500 "nmr500"

PULSE SEQUENCE: relayh

Relax. delay 0.500 sec

COSY 90-90

Acq. time 0.178 sec

Width 2882.3 Hz

2D Width 2882.3 Hz

8 repetitions

120 increments

OBSERVE H1, 409.8801324 MHz

DATA PROCESSING

Line broadening 0.1 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 1024 x 1024

Total time 11 min, 23 sec

TO220T" SE5E500T

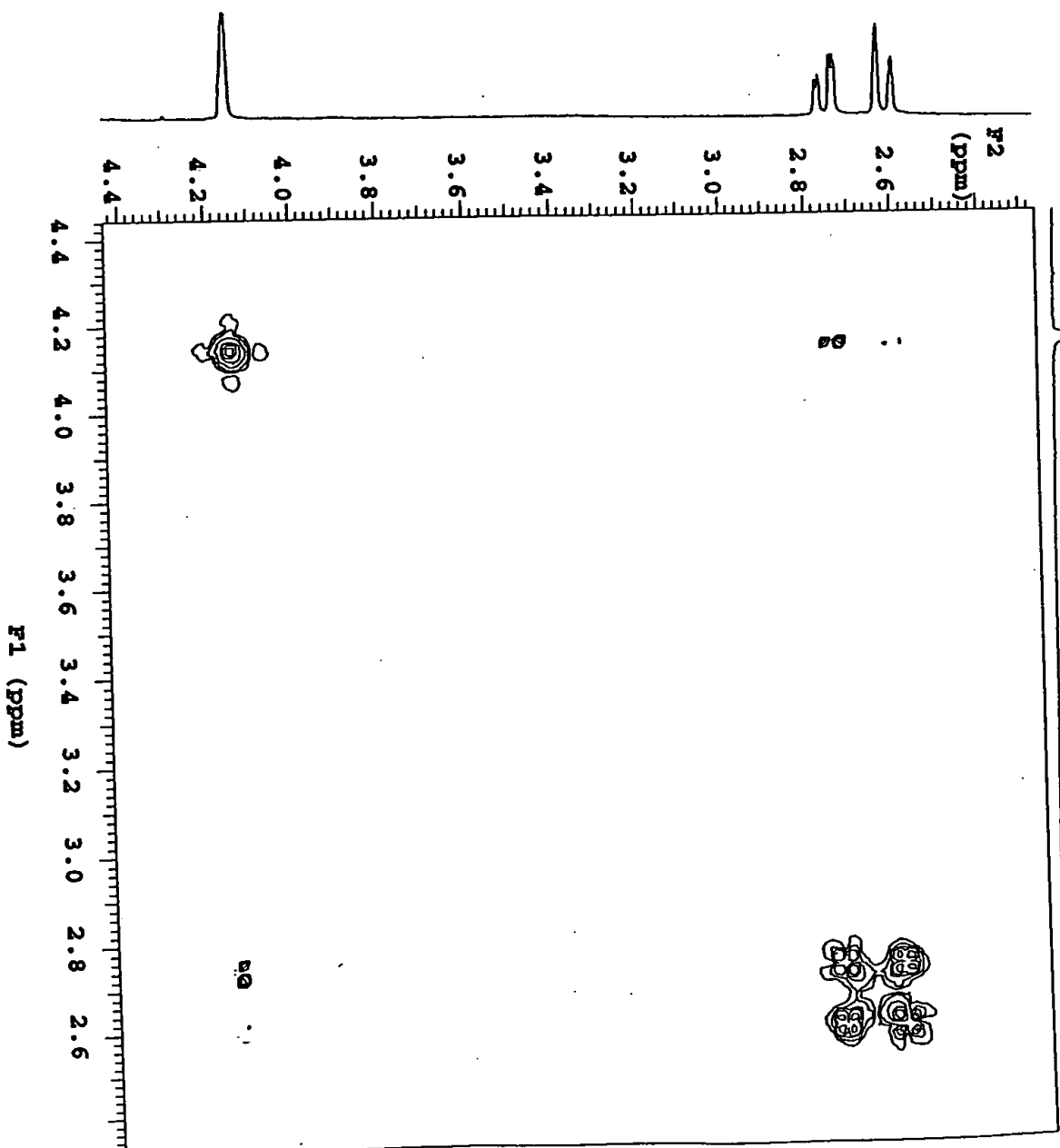


FIGURE 24B

COBY

Pulse Sequence: relayh

Solvent: D2O

Ambient temperature

UNITY-500 "nmr500"

PULSE SEQUENCE: relayh

Relax. delay 0.500 sec

COBY 90-90

Acq. time 0.178 sec

Width 2882.3 Hz

2D Width 2882.3 Hz

8 repetitions

120 increments

OBSERVE H1, 499.8801324 MHz

DATA PROCESSING

line broadening 0.1 Hz

F1 DATA PROCESSING

line broadening 0.3 Hz

FT size 1024 x 1024

Total time 11 min, 23 sec

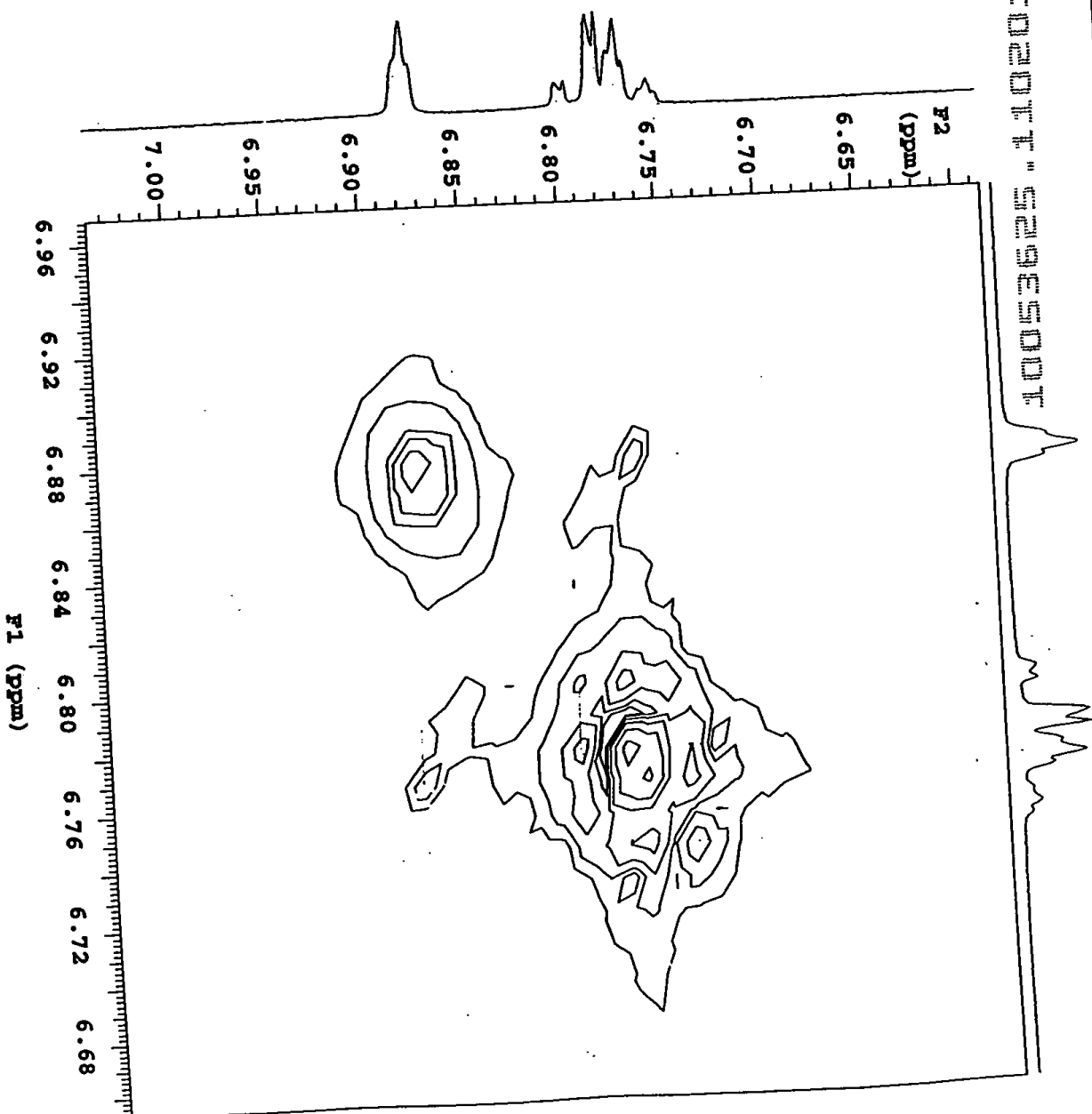


FIGURE 24C

H1 of 1 Acetylated in CDCl3
Pulse Sequence: zgpg30

102011" 52395001

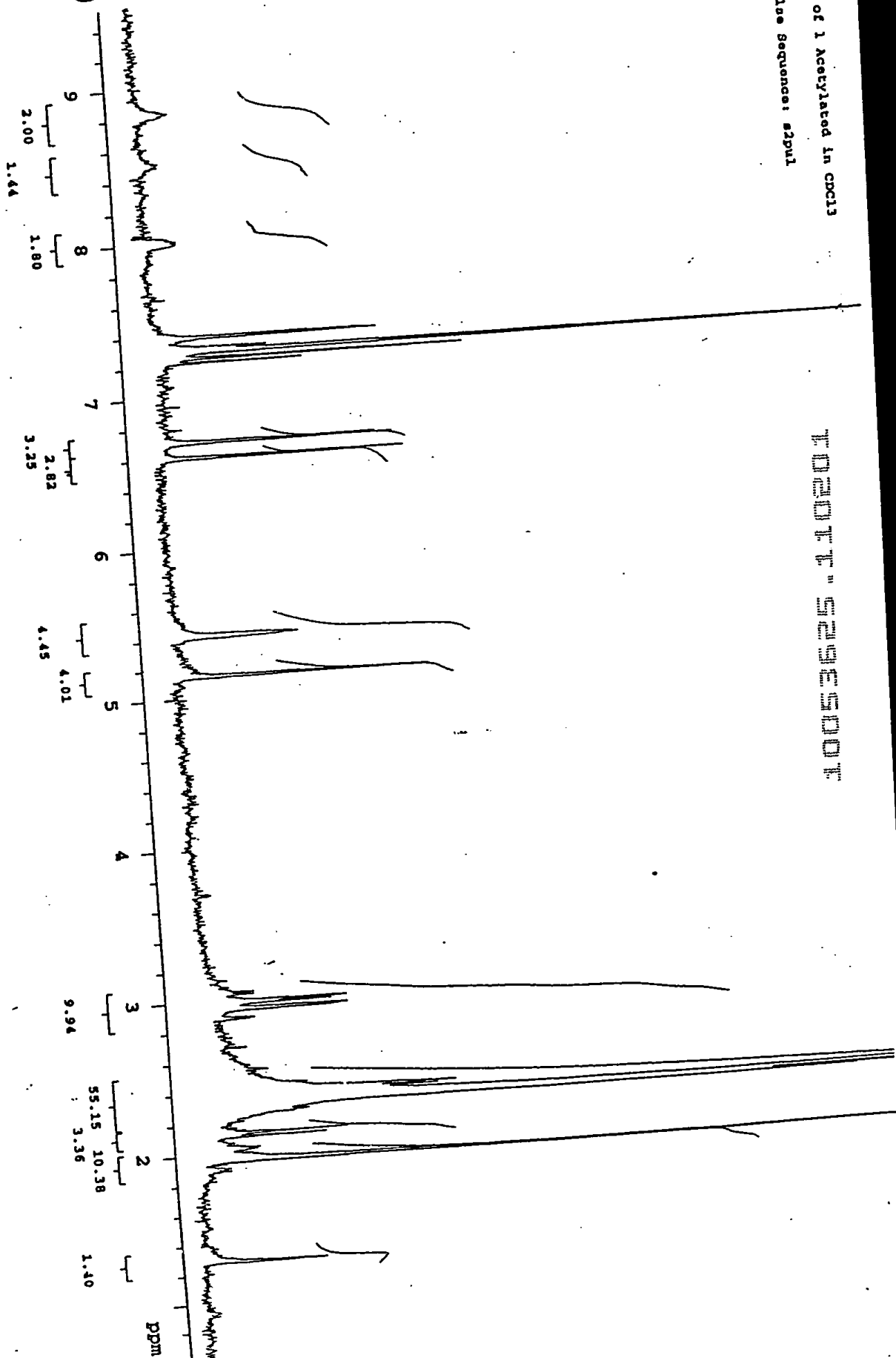


FIGURE 25

102011" 5295001

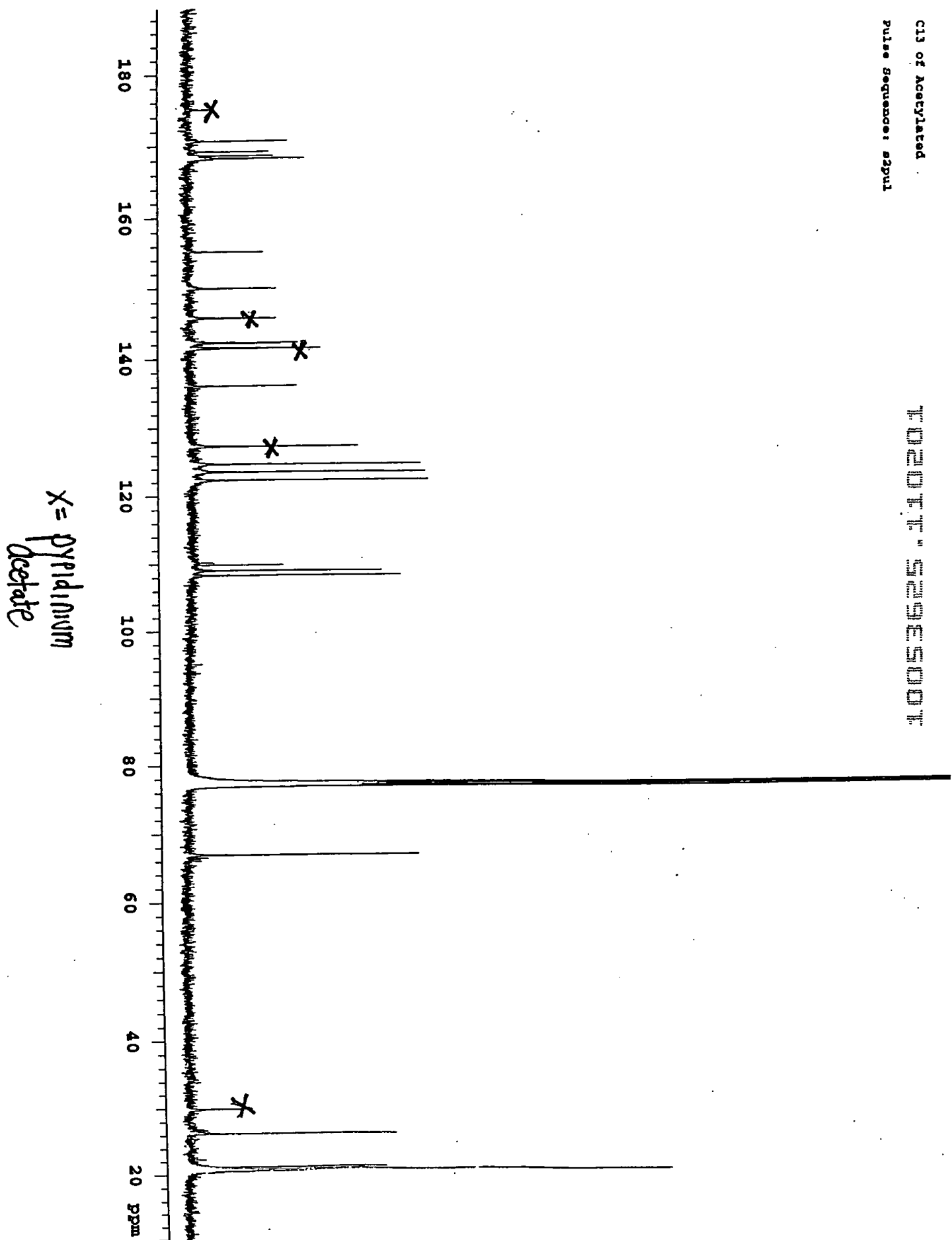


FIGURE 26

COSY

Pulse Sequence: relayh

Solvent: CDCl₃

Temp. 26.0 C / 299.1 K

INNOVA-500 "nmr500"

Relax. delay 0.500 sec

COSY 90-90

Acq. time 0.128 sec

Width 8000.0 Hz

2D Width 8000.0 Hz

16 repetitions

512 increments

OBSERVE H1, 499.9135718 MHz

DATA PROCESSING

Sine bell 0.064 sec

F1 DATA PROCESSING

Sine bell 0.032 sec

FT size 2048 x 2048

Total time 1 hr, 31 min, 32 sec

TO201T" S9E500T

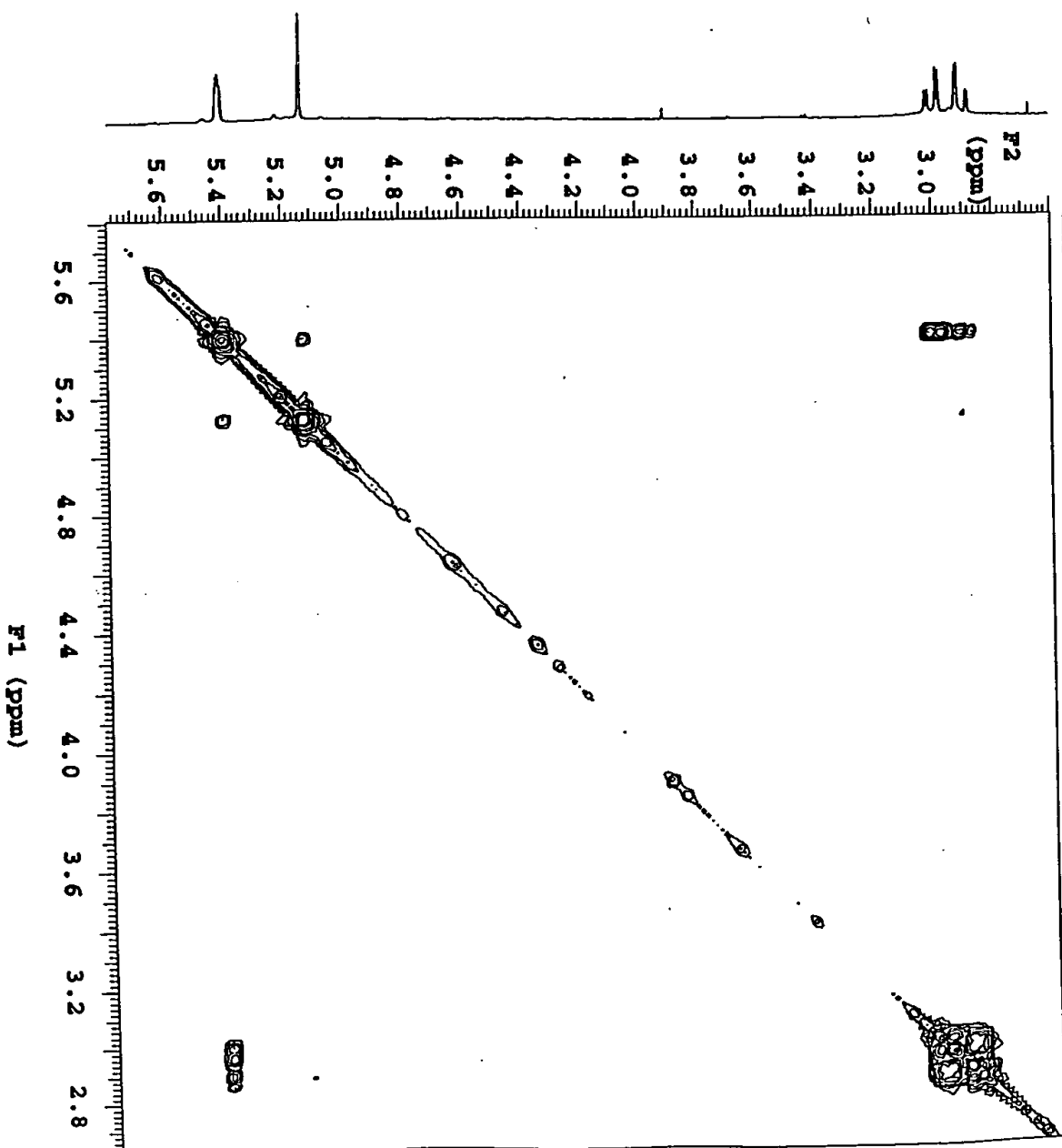


FIGURE 27

HETCOR of Acetylated in CDCl₃.

TOEPT 529E500T

Pulse Sequence: hetero

Solvent: CDCl₃

Temp. 26.0 C / 299.1 K

User: 1-14-87

INOVA-500 "nmr500"

Relax. delay 1.000 sec

Acq. time 0.082 sec

Width 25000.0 Hz

2D Width 4614.9 Hz

208 repetitions

256 increments

OBSERVE C13, 125.703376 MHz

DECOUPLE H1, 499.9160715 MHz

Power 38 dB

on during acquisition

off during delay

WALTZ-16 modulated

DATA PROCESSING

Line broadening 2.0 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

PT size 4096 x 1024

Total time 16 hr, 46 min, 21 sec

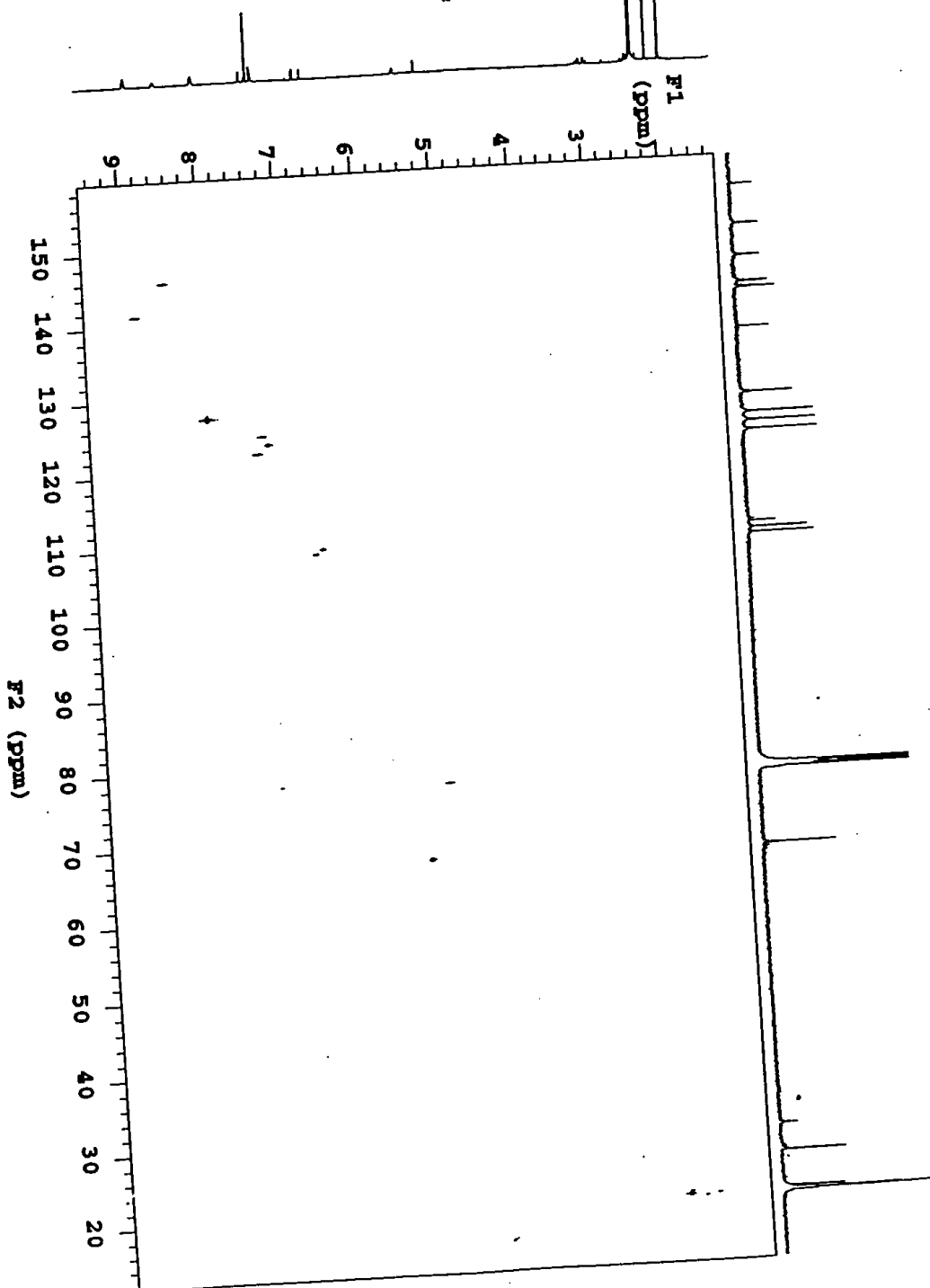


FIGURE 28A

HETCOR of Acetylated . in CDCl3.

Pulse Sequence: hetcor

Solvent: CDCl3

Temp. 26.0 C / 299.1 K

User: 1-14-87

INOVA-500 "nmr500"

Relax. delay 1.000 sec

Acq. time 0.082 sec

Width 25000.0 Hz

2D Width 4614.9 Hz

208 repetitions

256 increments

OBSERVE C13, 125.703376 MHz
DECOUPLE H1, 499.9160715 MHz

Power 38 dB

on during acquisition

off during delay

WALTZ-16 modulated

DATA PROCESSING

Line broadening 2.0 Hz

SI F2A PROCESSING

Line broadening 0.3 Hz

PC pulse 4096 x 1024

Total time 16 hr, 46 min, 21 sec

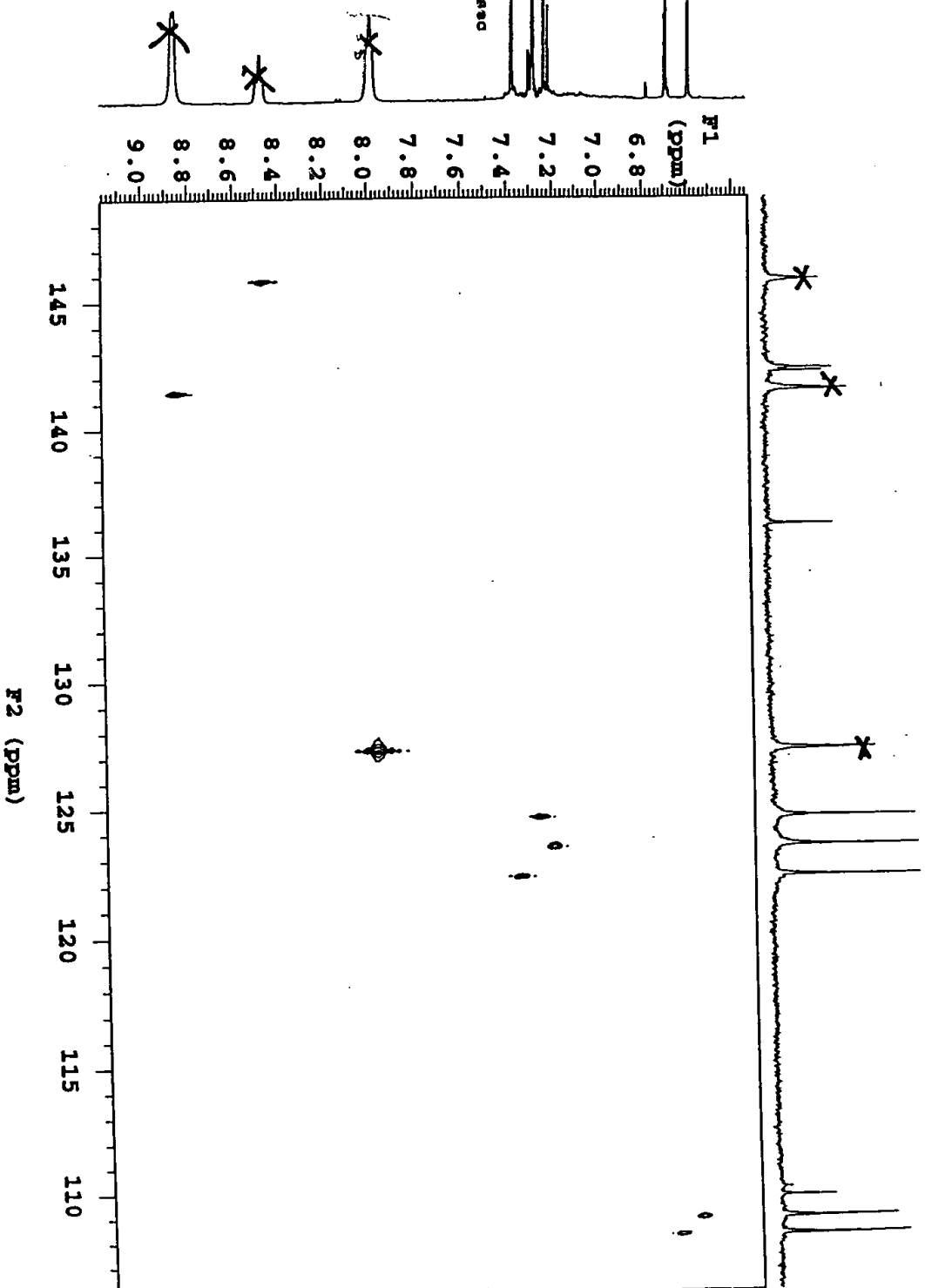


FIGURE 28B

HECTOR of acetylated in CDCl3.

Pulse Sequence: hector

Solvent: CDCl3

Temp. 26.0 C / 299.1 K

User: 1-14-87

INOVA-500 "nmr500"

Relax. delay 1.000 sec

Acq. time 0.082 sec

Width 25000.0 Hz

2D Width 4614.9 Hz

208 repetitions

256 increments

OBSERVE C13, 125.703376 MHz

DECOUPLE H1, 499.9160715 MHz

Power 38 dB

on during acquisition

off during delay

WALTZ-16 modulated

DATA PROCESSING

Line broadening 2.0 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT time 4096 x 1024

Total time 16 hr, 46 min, 21 sec

TOEPLITZ SEQUENCE
X = pyridinium acetate

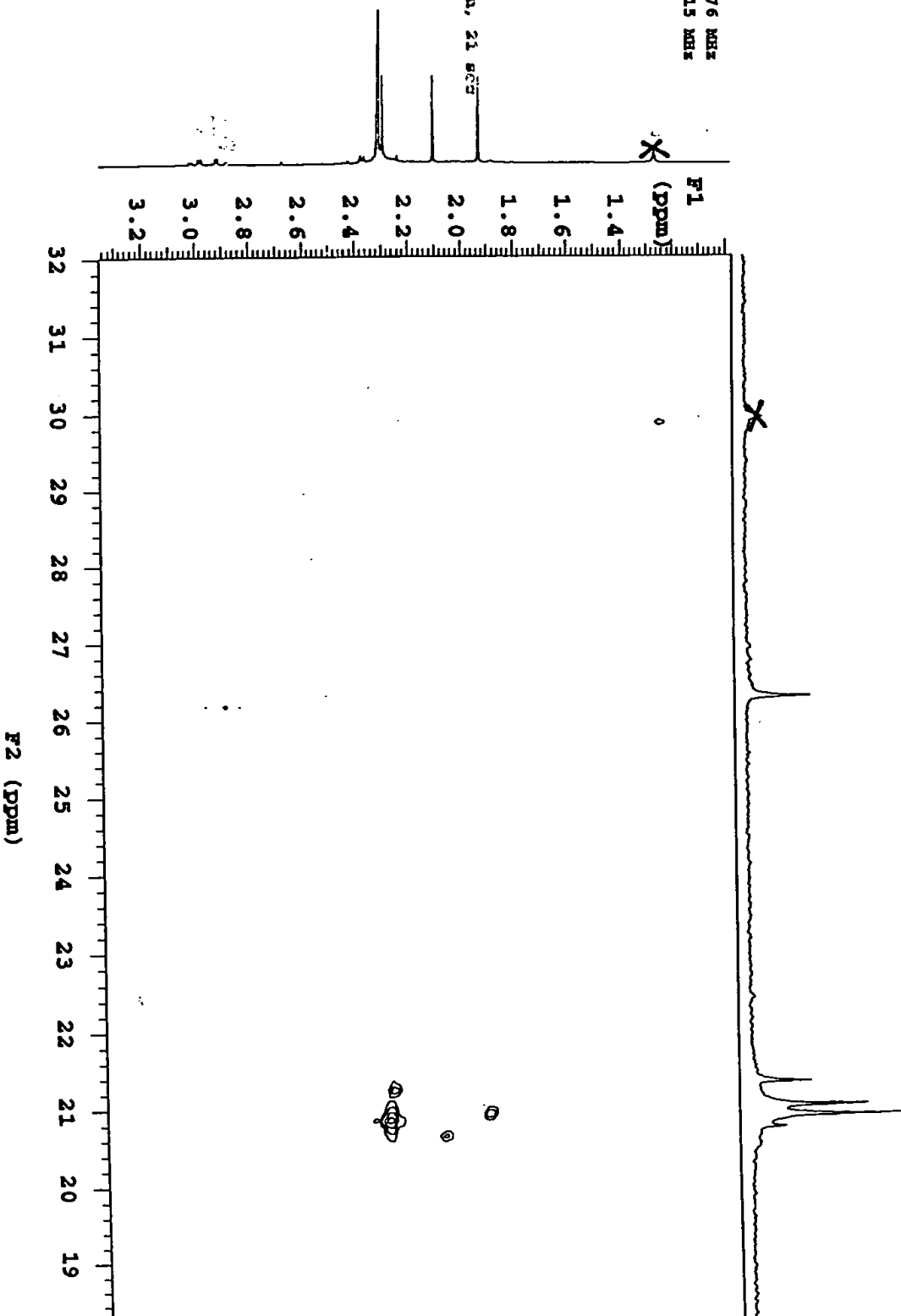


FIGURE 28C

TO20T" 529E500T

HELP

Wavelength Scan
ReadSamples Tabulate +*/Scans Scatter NetA Method SaveClear Print Quit

Scan directory: VIEW Autoprint: [No] Method name: A:\DEFAULT
Start w1: 200 nm Autosave: [No] Autosave name: [A:\]SCANS
End w1: 400 nm Scans per sample: 1 Sampling device: None
Overlay scans: [No] Interval: 15.00 [sec] Scan speed: 600 nm/min

A:\WORK_005 (600)

Zoom	ZoomOut	Trace	Function	Autoscale	Annotate	Print
------	---------	-------	----------	-----------	----------	-------

Functions: Scan

Smoother: None

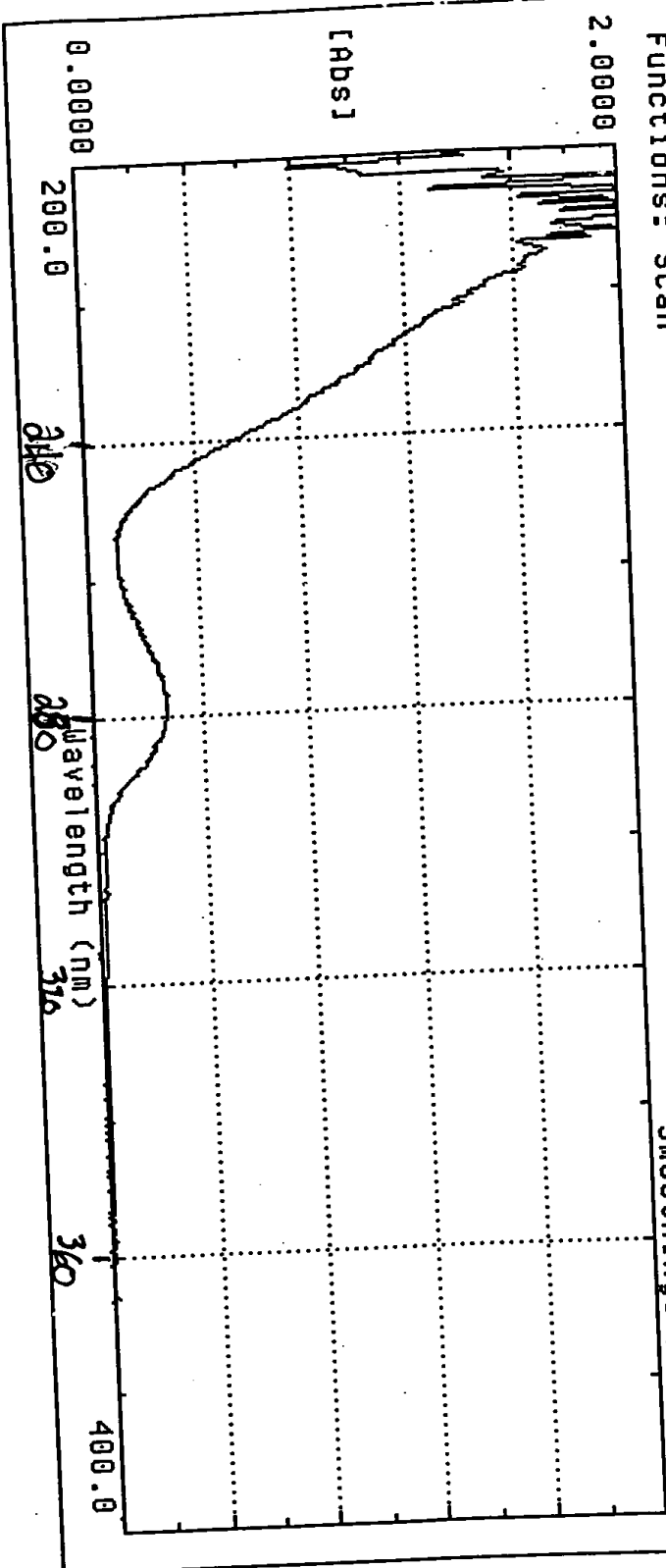
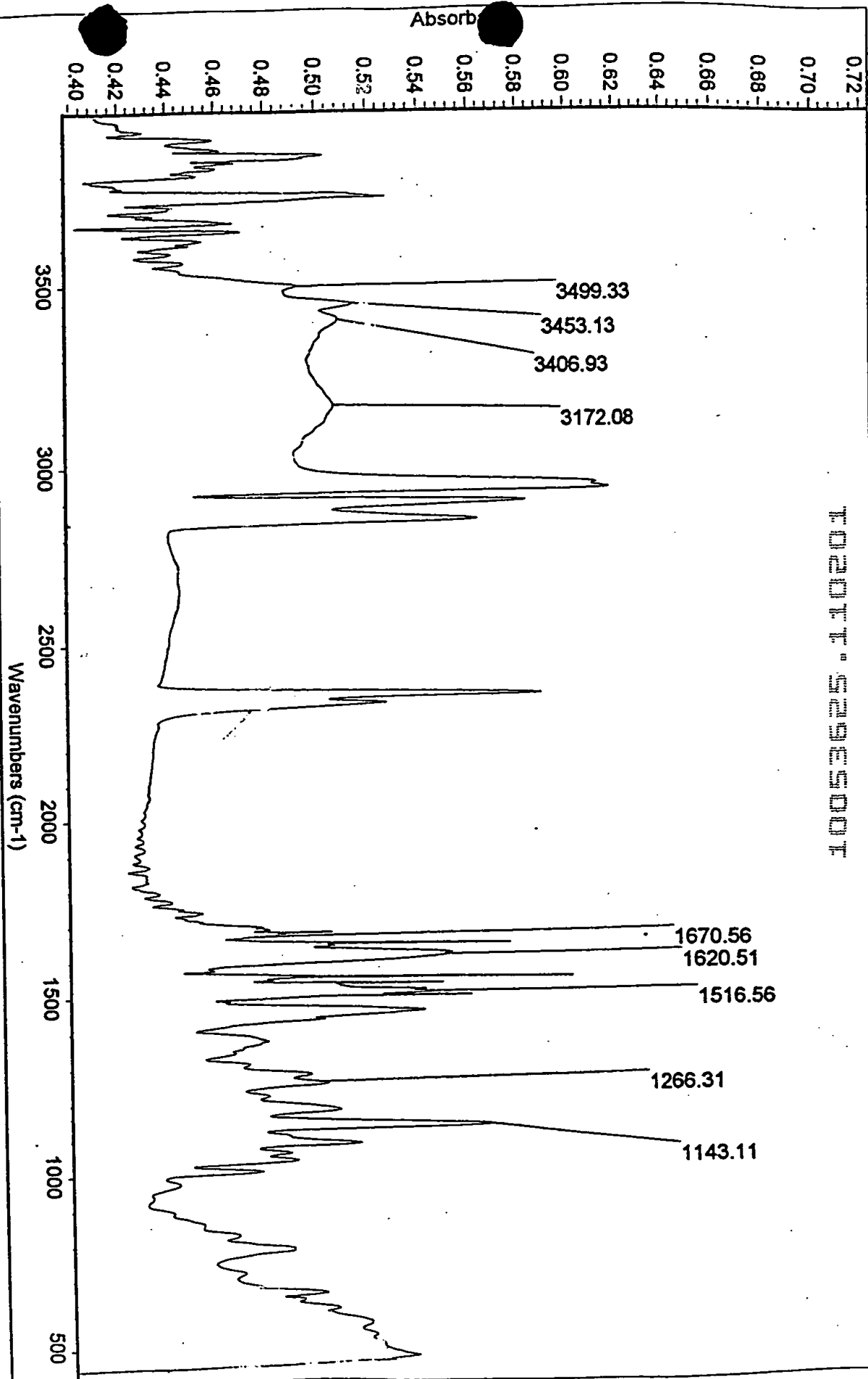


FIGURE 29

102017-52965001



**Subtraction Result:proteotech, sampleL

Scans: 32

Resolution: 4.000

FIGURE 30

Aromatic Alcohols and Phenols

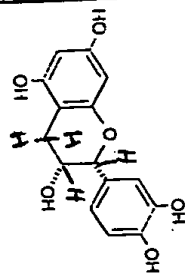
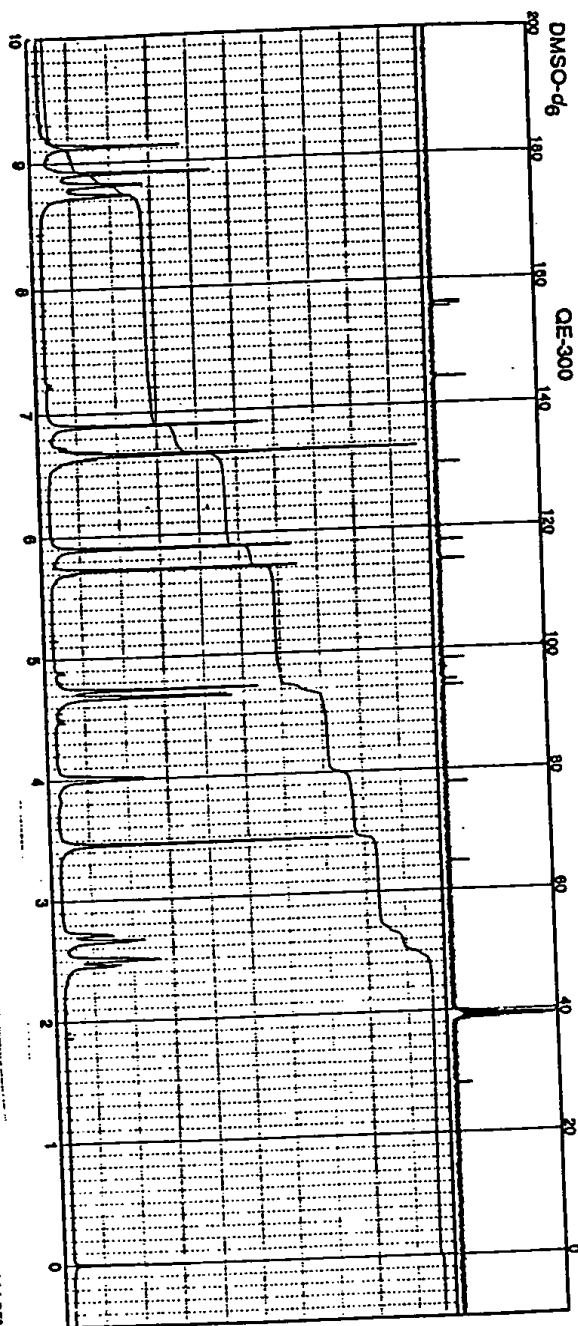
Aldrich 85,523-5
(-)-Epicatechin, 97%

CAS 1490-46-0

$C_{15}H_{14}O_6$
FW 280.27
mp 240°C d.

156.31 130.42 94.89°
156.01 117.78° 83.91°
155.57 114.89° 77.88°
144.28 114.58° 64.75°
144.23 98.31 28.07

A



Aldrich 86,181-2
(±)-Catechin hydrate, 98%

$C_{15}H_{14}O_6$
FW 280.28
mp 210°C d.

C

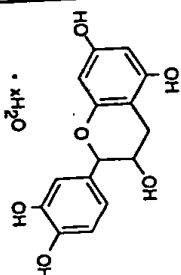
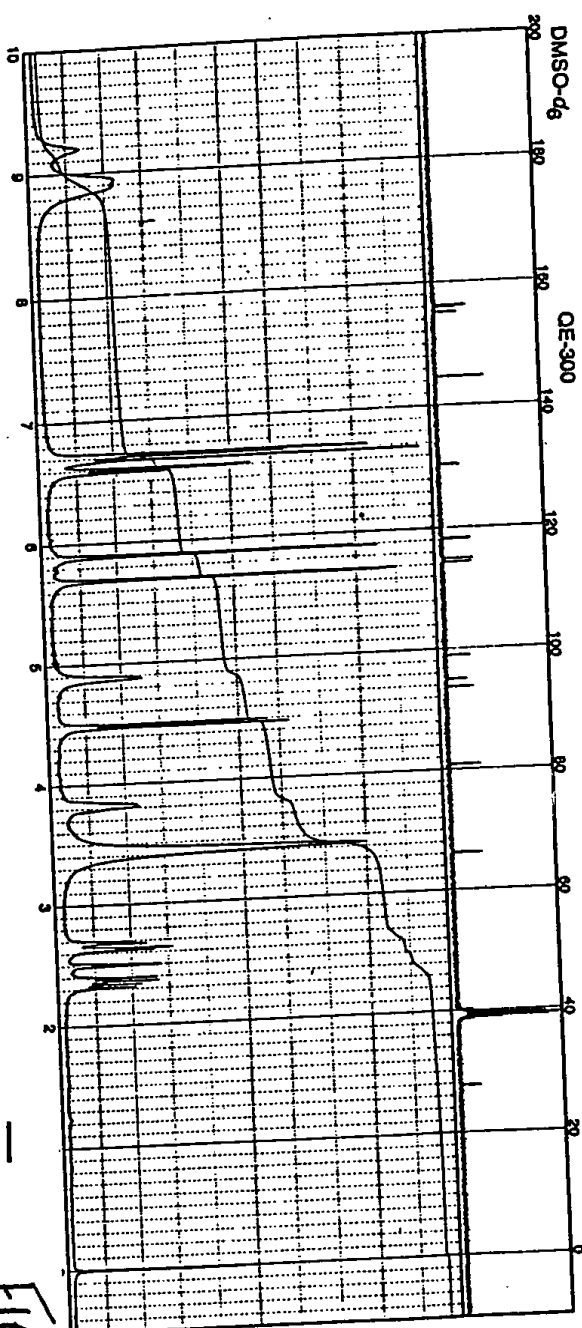


FIGURE 31

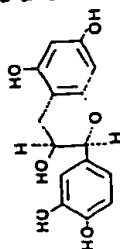
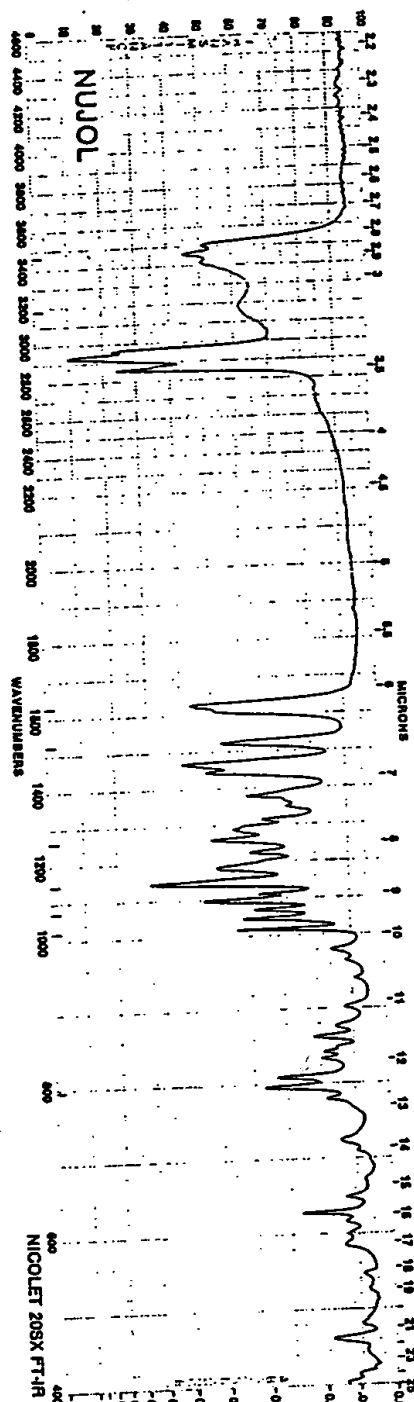
85523-5 CAS [490-46-0]
/Epicatechin

FW 290.27
mp 240°C(dec)

IR III, 673E

3455.2 1521.4 1089.5
3176.0 1261.0 1018.8
1628.3 1144.3 794.7

D



224022 CAS [154-23-4]
(+)-Catechin hydrate

FW 290.28

IR III, 703G
Merck 10,1883

3411.2 1514.7 1144.3
3134.9 1239.2 1020.8
1609.9 1236.4 832.3

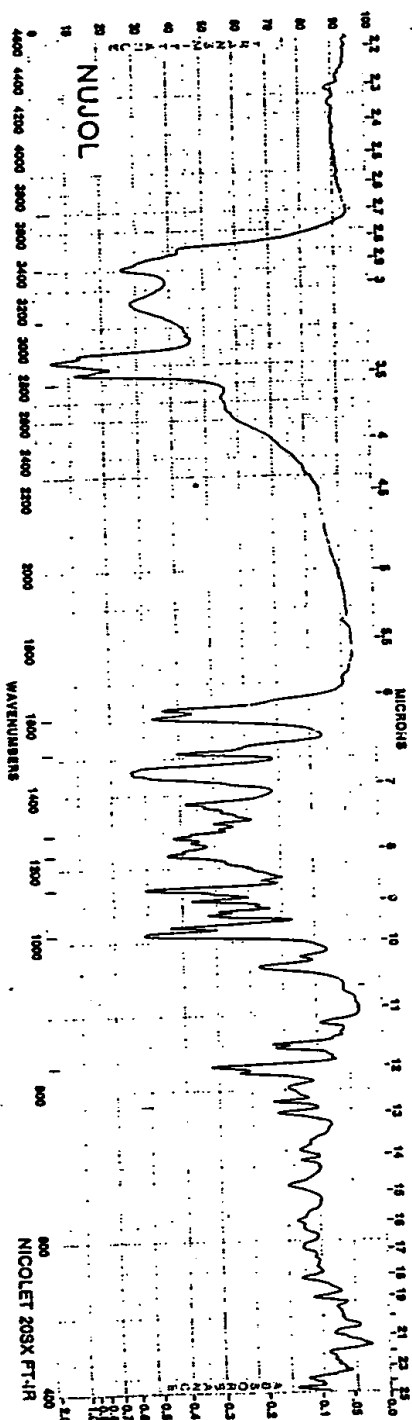


FIGURE 32

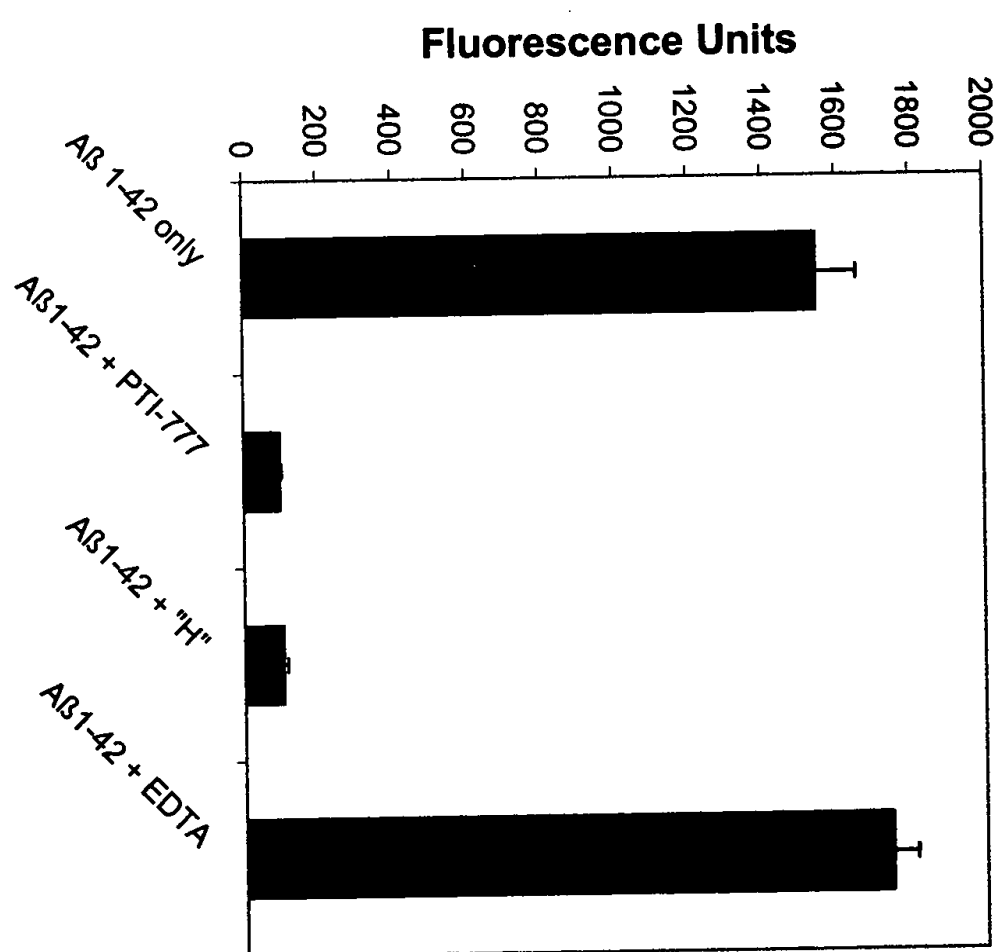


FIGURE 33

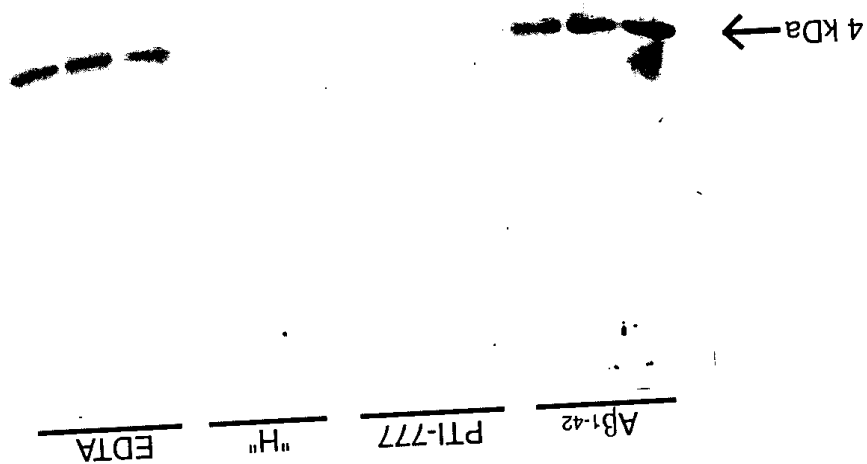


FIGURE 34